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MEETING OF THE

REGIONAL TRANSIT TECHNICAL ADVISORY COMMITTEE

**Wednesday, August 21, 2013
10:00 a.m. – 11:30 p.m.**

**SCAG Offices
818 W. 7th Street, 12th Floor
Policy Committee Room A
Los Angeles, California 90017
(213) 236-1800**

Teleconferencing Available:

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If members of the public wish to review the attachments or have any questions on any of the agenda items, please contact Matt Gleason at (213) 236-1832 or gleason@scag.ca.gov.

SCAG, in accordance with the Americans with Disabilities Act (ADA), will accommodate persons who require a modification of accommodation in order to participate in this meeting. SCAG is also committed to helping people with limited proficiency in the English language access the agency's essential public information and services. You can request such assistance by calling (213) 236-1993. We require at least 72 hours (three days) notice to provide reasonable accommodations. We prefer more notice if possible. We will make every effort to arrange for assistance as soon as possible.

REGIONAL TRANSIT TECHNICAL ADVISORY COMMITTEE AGENDA August 21, 2013

The Regional Transit Technical Advisory Committee may consider and act upon any of the items listed on the agenda regardless of whether they are listed as information or action items.

1.0 CALL TO ORDER

(Wayne Wassell, Metro, Regional Transit TAC Chair)

2.0 PUBLIC COMMENT PERIOD - Members of the public desiring to speak on items on the agenda, or items not on the agenda, but within the purview of the Regional Transit Technical Advisory Committee, must fill out and present a speaker's card to the assistant prior to speaking. Comments will be limited to three minutes. The chair may limit the total time for all comments to twenty (20) minutes.

3.0 CONSENT CALENDAR

3.1 Approval Items

3.1.1 <u>Minutes of the January 23, 2013 Regional Transit TAC Meeting</u>	5	1
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TRANSIT TECHNICAL ADVISORY COMMITTEE

AGENDA

August 21, 2013

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4.0 INFORMATION ITEMS

- | | | | |
|-----|--|----|----|
| 4.1 | <u>FTA MAP-21 Update</u>
<i>(Jonathan Klein, FTA)</i> | 25 | 6 |
| 4.2 | <u>2013 Clean Cities Data Collection Findings</u>
<i>(Matt Horton, SCAG Staff)</i> | 10 | * |
| 4.3 | <u>Metro First Mile/Last Mile Strategic Plan</u>
<i>(Alan Thompson, SCAG Staff)</i> | 40 | 26 |
| 4.4 | <u>SCAG Map Books for the 2016 RTP/SCS</u>
<i>(Kim Clark, SCAG Staff)</i> | 10 | 51 |

5.0 STAFF UPDATE

ADJOURNMENT

The next Regional Transit Technical Advisory Committee meeting is tentatively scheduled for Wednesday, October 30, 2013, at the SCAG's San Bernardino Office.

* Attachment under separate cover

Regional Transit Technical Advisory Committee (RTTAC)
of the
Southern California Association of Governments

May 29, 2013

Minutes

THE FOLLOWING MINUTES ARE A SUMMARY OF ACTIONS TAKEN BY THE REGIONAL TRANSIT TECHNICAL ADVISORY COMMITTEE (RTTAC). AN AUDIO RECORDING OF THE MEETING IS AVAILABLE FOR LISTENING IN SCAG'S OFFICE.

The Regional Transit Technical Advisory Committee held its meeting at SCAG's office in downtown Los Angeles. The meeting was called to order by Wayne Wassell, Chair.

Members Present:

Wayne A. Wassell (Chair)	MTA
Karen Sakoda	Metrolink
Vic Kamhi	VCTC

Video Conference:

Kevin Kane	Victor Valley Transit
Jeremiah Bryant	Omni Trans
David Salgado	Imperial Valley Transit Commission
Gordon Robinson	Riverside Transit Agency

SCAG Staff:

Stephen Fox
Matthew Gleason
Philip Law

1.0 CALL TO ORDER

Wayne Wassell, Chair, called the meeting to order at 2:04 p.m.

2.0 PUBLIC COMMENT PERIOD

No member of the public requested to make a comment.

2.1 Review and Prioritize Agenda Items

There was no prioritization of the agenda.

3.0 CONSENT CALENDAR

3.1 Approval Items

3.1.1 Minutes of the January 23, 2013 Regional Transit TAC Meeting

The Consent Calendar was approved by voice consensus.

4.0 INFORMATION ITEMS

4.1 RTTAC Charter Update

Matt Gleason, SCAG Staff, stated at the January 23rd meeting items pertaining to the modification of the committee charter was presented. There was discussion and the committee instructed staff to work with Chair Wassell to incorporate these charter modifications.

Chair Wassell, stated two changes to the Charter are proposed. The first involves expanding the qualifications for the role of Chairperson. Previously it was indicated that only members of a county transportation commission or transit operator could serve as chair. The proposed change removes that restriction. Mr. Wassell stated the second revision involves modifying language regarding meeting frequency to state the committee will meet on an ad hoc basis for the duration of the current RTP/SCS cycle without indicating a specific cycle year which requires constant updating.

By group consensus the revised Charter amendments were accepted by the committee.

5.0 INFORMATION ITEMS

5.1 Ventura County Transit Update

Vic Kamhi, Ventura County Transportation Commission, provided an update on Ventura County Transit and the Countywide Transit Plan. Mr. Kamhi stated Ventura County though a smaller regional county of 800,000 has 6 municipal transit providers and 3 multi-agency providers with significant overlap in services. It was noted the transit operators uniformly use the GoVentura Smartcard and a universal transfer system, however, the different transit providers operate different service hours, require different fares and there's differences in the definitions of a senior rider. Mr. Kamhi stated the Countywide Transit Plan emerged from the enactment of SB 716 which encouraged Ventura County to prepare a comprehensive transit plan and that Ventura County use all of its Transportation Development Act funds for transit and no longer for street and road purposes beginning July 1, 2014.

Mr. Kamhi stated a plan was developed over a two year period which involved countywide focus groups and meetings with transit operators and citizens committees. It was recommended that a full consolidation of transit services in Ventura County take place. Alternatively, a Managers Plan was put forth and adopted by VCTC. The Managers Plan called for much of the

current transit structure to remain and for the legislature to repeal SB 716 as it affected Ventura County.

The Countywide Transit plan calls for Gold Coast to continue its effort to become a transit district. Also, efforts to develop a MOA and service plan between the east county cities should continue. And that a Transit Service Plan for the Heritage Valley progress with the creation of a new agency to provide transit services. Additionally, a clarification of VCTC's role is to be examined.

Mr. Kamhi noted the current outlook is for the creation of three transit districts. Gold Coast would serve Oxnard, Ventura, Port Hueneme, Ojai and unincorporated County. In the East County Camarillo, Moorpark, Simi Valley and Thousand Oaks will continue to operate their own services. Thirdly, the Heritage Valley would seek the creation of a JPA to provide fixed route and demand responsive service for Fillmore, Santa Paula and the unincorporated area of Piru.

5.2 Clean Cities Data Collection Efforts

Matt Horton, SCAG Staff, provided an update on Clean Cities data collection efforts. Mr. Horton stated he coordinates the Clean Cities program and current efforts involve surveying and data collection from member cities. Mr. Horton noted the current year's preliminary results show a reduction of approximately 45 million gallons of gasoline usage regionally along with the reduction of 126 million tons of greenhouse gas emissions. Mr. Horton noted these totals are down compared to the previous year which is largely attributed to a change in the DOE's calculation of the metrics.

Mr. Horton noted a certified report is anticipated late Summer or early Fall of 2013.

5.3 SCAG Transit Level of Service Data Collection Efforts

Yongping Zhang, SCAG Staff, presented an update on SCAG transit level of service data collection efforts. Mr. Zhang stated he is SCAG's Project Manager for this effort. This is the second data collection effort which follows the 2010 effort. Mr. Zhang noted the current effort for the 2016 RTP/SCS will use 2012 as the baseline year. Mr. Zhang introduced Steve Green, Ph.D. of AECOM.

Mr. Green stated this data collection is the first step toward a successful 2016 RTP/SCS modeling effort. The current effort involves compiling a data base of all transit services in the region's 6 counties in preparation for the

validation of the 2016 model. The types of data collected include transit boardings, fare data (pay per average rider) and route stops of every transit line in the region. Additionally, system wide performance measures are being collected that can be used for performance monitoring and reporting. Another goal is to create a GIS database of park and ride locations.

The system wide data being collected include total transit passengers, passenger miles, vehicle miles travelled, and cost per one-hundred thousand miles. This involves understanding route level data for each route operated by transit operators regionally. This includes boardings by route, stop locations and frequency of services. Mr. Green noted there are 79 fixed route transit operators in the SCAG region. Of these 79 fixed route operators some are JPO's, others are municipal agencies, 24 of them report to the national transit database and 58 are included in the Tripmaster Database maintained by Los Angeles Metropolitan Transit Authority.

The survey seeks information specific to each fixed route operator. Mr. Green noted 39 responses have been received and efforts continue to receive data from each operator.

5.4 System Performance Report Update

Matt Gleason, SCAG Staff, presented an update FY 10 – 11 Transit System Performance Report. Mr. Gleason stated a draft of the report has been distributed to committee members. It was further noted MAP-21 includes provisions that may shift toward more frequent performance measurement particularly for the FTIP. Mr. Gleason stated the region is diverse with nearly 100 transit providers. Additionally, for the FY 10-11 Transit Performance Report there are four key goals. The first examines a framework for understanding transit investments issues. These include mobility, governance, and a section on service provision and consumption in the region.

The next goal seeks to create a resource for policy makers by detailing investments and returns as well as planning for operations. Also, to provide a benchmarking resource for operators as well as integrating current and foreseen MAP-21 provisions. Mr. Gleason noted the report is organized in four sections. The first covers public transportation in the SCAG Region which examines issues of governance, transit's role in providing mobility and sub-modes. The second reviews transit system performance. The third section looks at transit performance at the regional level. The fourth reviews the performance of the individual transit operators in the region.

Mr. Gleason reviewed the preliminary findings including total trips by mode, journey to work data, zero car households in the region and service provision and consumption in the region. Further, regional ridership trends were reviewed including per capita transit trips and passenger miles as well as regional financial performance. Submodal shares were examined indicating a growth in rail transit service since 1991.

Other data examines operating cost per revenue hour, farebox recovery and cost per passenger trip. Also, fleet vehicle age and average vehicle speeds were examined.

Mr. Gleason stated comments will be received regarding the draft until June 28, 2013 and it is anticipated a final report will be completed in July 2013. These findings will be incorporated in the 2016 RTP/SCS.

ADJOURNMENT

The meeting adjourned at 3:12 p.m. The next meeting of the Regional Transit Technical Advisory Committee is August 21, 2013.

FTA

FEDERAL TRANSIT ADMINISTRATION



MAP-21

Moving Ahead for Progress in the 21st Century

Transforming the Way we Build, Manage, and Maintain our Nation's Transit Systems



U.S. Department of Transportation
Federal Transit Administration

Overview of Presentation

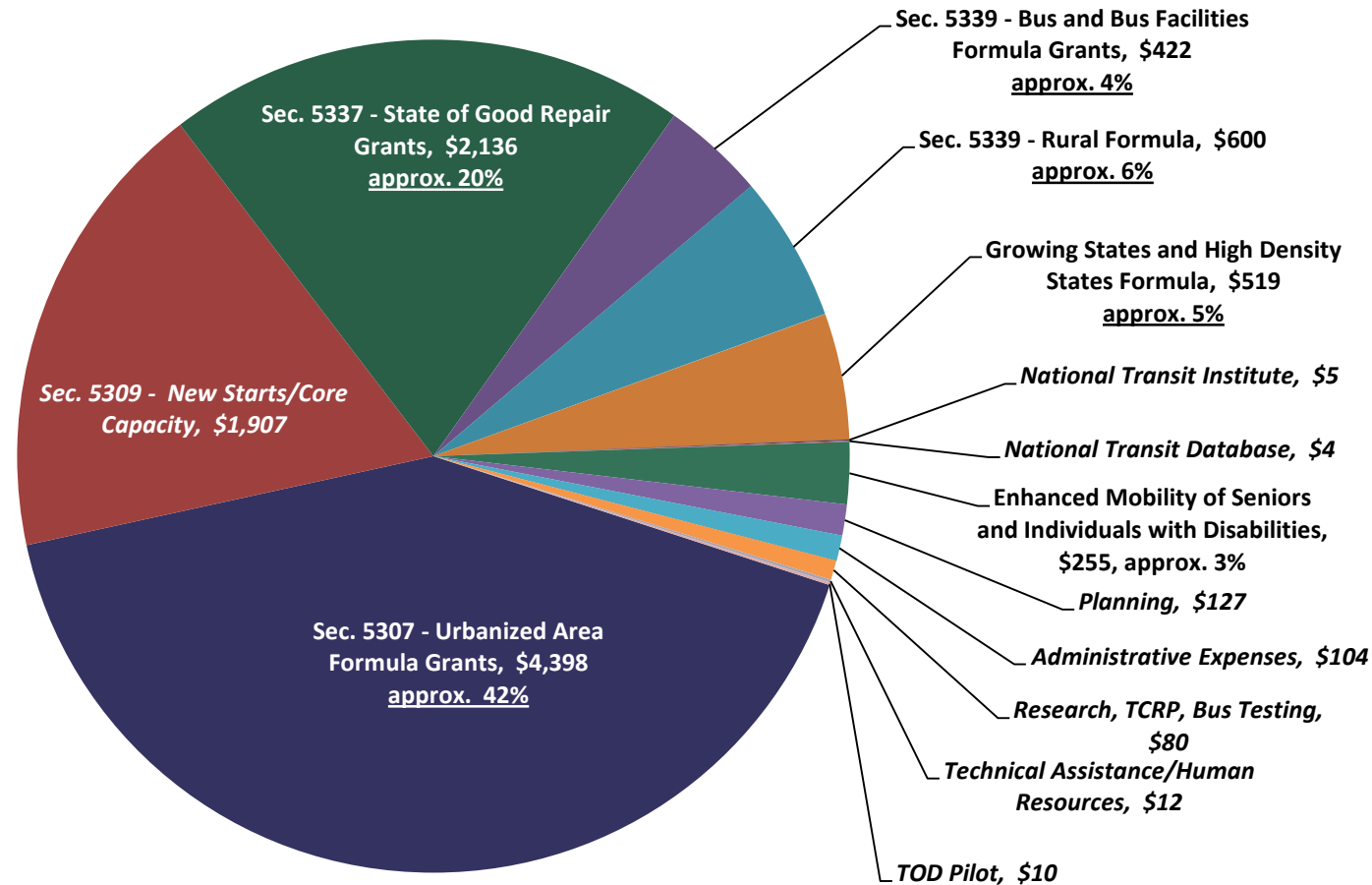
- MAP-21 Authorization Overview
- FY 2013 Apportionment Notice
- Key Provisions and Interim Guidance
 - Planning and Environment
 - Fixed Guideway Capital Investment Program (Sec. 5309)
 - Formula Grant Programs (Sec. 5307, 5310, 5311, 5337, 5339)
 - Research Programs
- Next Steps - Future Implementation
- Q&A

Authorization: Moving Ahead for Progress in the 21st Century Act (MAP-21)

- Replaces SAFETEA-LU.
- Signed into law by President Obama on July 6, 2012
- Effective October 1, 2012 (start FY13)
- Authorizes programs for two years, through September 30, 2014 (end FY14)
- Program requirement changes
- Formula fund calculation methodology changes

MAP-21 Authorized Funding

FY 2013 Authorized Funding = \$10.578 Billion



FY 2013 Apportionment Notice (issued Oct. 16, 2012)

Organized by 5 Sections:

- I. Overview
- II. FY 2013 Funding for FTA Programs
- III. MAP-21 Highlighted Changes
- IV. Program-Specific Information (interim guidance)
- V. FTA Policy and Procedures for FY 2013 Grants

Overview

- **Apportions funds** pursuant to continuing resolution. The Consolidated and Further Continuing Appropriations Act, 2013 (signed April 1, 2013) provides the FY13 fund balance.
- **Provides Interim Guidance** for new and revised programs authorized by MAP-21, preceding revisions to FTA Circulars (posted at www.fta.dot.gov/circulars)
- Describes future plans for MAP-21 implementation
- Includes information for available Carryover/Unobligated Discretionary Funding
- Oversight takedown percentages

MAP-21 and FY 2013 Appropriations: Highlights of Changes

- **MAP-21 Focus Areas**
 - Safety, State of Good Repair, Asset Management, Streamlining and Program Efficiency, Formula and Discretionary Funding, and Impacts of the 2010 Census areas on Formula Funding
- **Definitional Changes and New Definitions**
 - Bus Rapid Transit
 - Fixed Guideway
 - Public Transportation
 - Job Access and Reverse Commute Project
- **Repealed and Consolidated Programs**
 - Repealed: Sec. 5316 (JARC), 5317 (New Freedom), 5308 (Clean Fuels) 5309 (Bus Earmarks), OTRB program, 5320 (Transit in Parks).
 - Sec. 5309 Fixed Guideway program transferred to Sec. 5337

MAP-21 and FY 2013 Appropriations: Highlights of Changes (continued)

- **Cross-Cutting Requirements under MAP-21**
 - Several subject to rule-making -- not in effect immediately
 - Agency Safety Plans: all grantees must have safety plans. FTA must define State of Good Repair and related requirements for capital assets.
 - Transit Asset Management (TAM): all grantees must have TAM Plans. Small agencies may be able to defer to state plans. FTA must define TAM and related requirements.
 - Cost Share for vehicles in compliance with ADA or CAA now 85%
 - Length of options extended for Rail Car Procurements: 7 years
- **Title 23 Programs – FHWA Transfers**
 - Describes the eligible programs, how to accomplish a transfer, matching share, and which FTA program funds under MAP-21 are eligible to transfer to FHWA
 - Flexible funding transfers from Title 23 - option for transit, but not highways.

Planning and Environmental

- Transit representation on MPO boards in regions of 200,000 population or more
- Performance measures and targets in Long Range Plans and Transportation Improvement Programs (TIPs)
- Accelerate project delivery and promote innovation while enhancing safety and protecting the environment
 - Expanded NEPA Categorical Exclusions
 - New Starts process
 - Public Private Partnerships

Program-Specific Information

- Authorized Amounts
- FY 2013 Funding Availability
- Basis for Formula Apportionment / Allocating funds
- Requirements
- Period of Availability (lapse dates)
- Other Program Information or Changes

Fixed Guideway Capital Investment Programs (a.k.a. New Starts, Small Starts, Core Capacity)

- Eligible projects
 - New and Small Starts dollar thresholds the same
 - BRT on HOV no longer eligible as fixed guideway project
 - Core capacity included
- Changes to steps in the process noted
- Pre-Award Authority
- LONP process
- Final Rule published January 2013
- Guidance published August 2013

Formula Grant Programs

Section 5307 Urbanized Area Formula Program

- Formula Changes
- 2010 Census Changes incorporated
- Ferry Boat Discretionary Program
- Job Access and Reverse Commute eligibility
 - New and Maintenance projects are eligible
- Operating Assistance Special Rule for areas over 200,000
- Expanded Local Match
- Period of Availability extended to 6 years (year of apportionment plus 5 years)

Formula Grant Programs

Section 5310 Enhanced Mobility of Seniors and Individuals with Disabilities

- Apportionments for and to Urbanized Areas
- Designated Recipients needed in large Urbanized Areas
- Coordinated Planning Requirement (“included in”)
- Traditional Sec. 5310 Capital and Operating projects (55% minimum)
- New Freedom-type projects are eligible (45% maximum)
- State/Program Management Plans
- Period of availability: year of apportionment plus 2 years.
- Draft Circular 9070.1G published July 11, 2013.

Formula Grant Programs

Section 5337 State of Good Repair Program (formerly the Fixed Guideway Modernization Program)

- New Formula and New Formula Tiers
 - Two Tiers; High Intensity Fixed Guideway and High Intensity Motor Bus
- New Definition of Fixed Guideway Project; HOV excluded
- Apportionments to areas with fixed guideway systems in operations for 7 years or more
- Eligibility changes to solely repair and replace
- Period of availability: year of appropriation plus 3 years.

Formula Grant Programs

Section 5339 Bus and Bus Facilities Program

- Capital Formula Program
 - National Distribution Amount – States and Territories
 - Apportionments to large urbanized areas and to the State for small urbanized areas
- Urbanized Area: designated / direct recipient is the Sec. 5307 program designated recipient
- Small Urbanized / Rural Areas: states administer for all areas under 200,000 and have flexibility on where to use funds under the national distribution amount and the small urbanized area amounts
- Period of availability: year of apportionment plus 3 years.

Research, Technical Assistance and Workforce Programs

- New MAP-21 categories include:
 - Research, Development, Demonstration, and Deployment
 - Upcoming NOFA for Low or No Emissions Vehicle Deployment Program
 - Technical Assistance and Standards
 - Transit Oriented Development / Consolidated Planning
 - Emergency Relief

V. FTA Policy and Procedures for FY 2013 Grants

- Civil Rights: Revised Title VI Circular and due dates for program submissions
- Grant Application Procedures
 - Separate grants required for new programs
 - Documentation may be necessary for new designated recipients under certain programs
 - Supplemental Agreement
- Grant Management: Grant Reporting and expectations for reasonable progress

Next Steps – Future Implementation

- Webinars & Stakeholder Meetings/Conferences
- Frequently Asked Questions
- Tribal Consultation
- Program Circular Revisions
- Rulemakings
 - Performance Measures
 - Safety
 - Asset Management
 - NEPA
- Notice and Comment

FTA MAP-21 Website

www.fta.dot.gov/map21



The screenshot shows the homepage of the FTA MAP-21 website. At the top left is the U.S. Department of Transportation Federal Transit Administration logo. To its right is a photograph of a modern light rail train. Below the logo and photo is a navigation bar with links: Newsroom, Grants, Legislation & Law, About FTA, and Civil Rights. A search bar is located on the right side of the navigation bar. The main content area features a large banner image of construction workers in orange safety gear and green hard hats working on a transit project. Overlaid on this image is the text "MAP-21" in large blue letters, followed by "Moving Ahead for Progress in the 21st Century" and "Transforming the Way we Build, Manage, and Maintain our Nation's Transit Systems". Below the banner, there is a paragraph of text and a sign-up button for email updates.

U.S. Department of Transportation
Federal Transit Administration

Newsroom Grants Legislation & Law About FTA Civil Rights Search

MAP-21
Moving Ahead for Progress in the 21st Century
Transforming the Way we Build, Manage, and Maintain our Nation's Transit Systems

Visit this website often for information on FTA's implementation of MAP-21, including program information and guidance for grantees.

 Sign up for email updates on this topic.



Federal Transit
Administration
www.fta.dot.gov

FTA

FEDERAL TRANSIT ADMINISTRATION



FIRST LAST MILE

STRATEGIC PLAN

Meeting Agenda:

- 1) Review Project Status & Schedule
- 2) Present Planning Guidelines Structure & Content
 - Focus on Path Components and Illustrations
- 3) Discussion



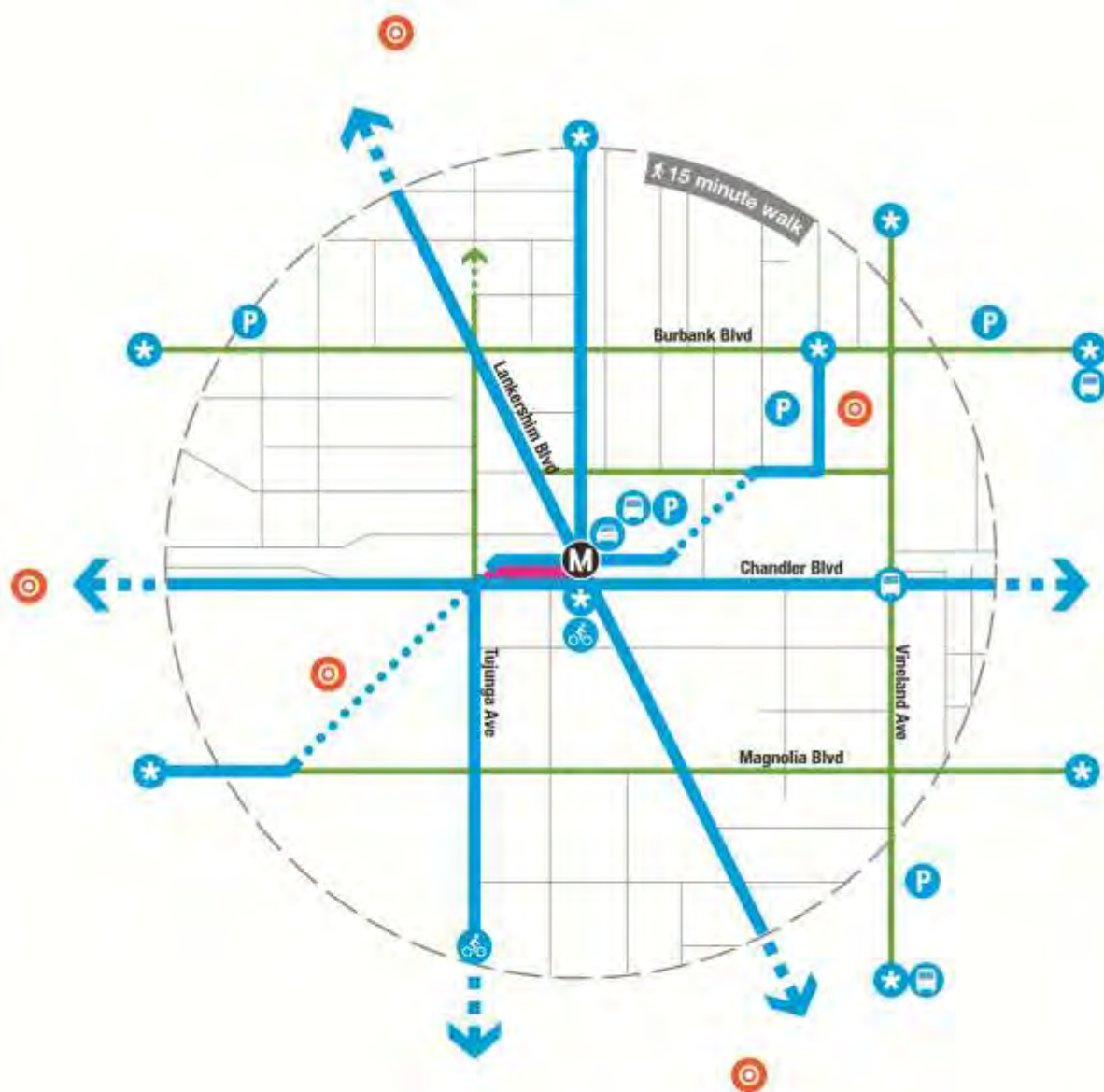
Project Status:

- Project TAC #4 August 6th 2013 ***Last Project TAC Meeting***
- TAC Meeting #3 May 21st 2013 Presentation to Ad Hoc Sustainability Committee June 26th 2013
- Presentation to Streets and Freeways TAC July 18th 2013
- Presentation to Metro TAC July 24th 2013
- Project TAC Meeting #4 August 6th 2013 ***Today***

Next Steps

- Issue Planning Guidelines for Project TAC Review





Metro Path

NORTH HOLLYWOOD

LEGEND

-  Destination
-  Parking
-  Way Finding
-  Bike Share
-  Car Share
-  Bus Stop
-  Transit Plaza
-  Path Collector
-  Path Arterial
-  Path Cut-Through
-  To Regional Bike Network



Review TAC Meeting #3

Metro Path

Planning Guidelines

TABLE OF CONTENTS

1	INTRODUCTION	3
2	PATH USERS	13
3	NETWORK IDENTIFICATION, DESIGN, AND IMPLEMENTATION	17
4	PATH COMPONENTS	25
5	ILLUSTRATIONS	57

Access Modes



15%

**Drive & Park
or Dropped-Off at Stations
Roads & Parking Facilities**



85%

**Walk, Bike, or Roll
to Metro Rail & BRT Stations**
Active Transportation Networks
2011 Metro On-Board Survey



The fact that the vast majority of transit users are already walking or rolling themselves to stations demands a careful consideration of the relationship active transportation has to the regional transportation system. A number of questions must be asked: What is the condition of the existing active transportation network in Los Angeles County? Is the network designed to support modern modes of active mobility? Do existing networks seamlessly integrate transit users with transit stations? What part of the active transportation network is an integral component of the county-wide "transportation system"? The Metro Path responds to these questions, and proposes a transit access strategy built on rationally developed active transportation networks located around Metro Rail and BRT stations.

Metro First-Last Mile Strategic Goals

- 1 Expand the reach of transit through infrastructure improvements.
- 2 Maximize multi-modal benefits & efficiencies.
- 3 Build on the RTRSCS & Countywide Sustainable Planning Policy (multi-modal, green and smart).

1

INTRODUCTION



Metro Path

- ★ These guidelines outline a specific infrastructure improvement strategy designed to facilitate transportation system access while responding to regional policy directives that support sustainable transportation and human health. These guidelines introduce a concept herein referred to as the **Metro Path (Path)**, and provide direction on the layout and design of Path networks and components within Metro serviced rail and bus-rapid transit station areas. At time of this writing, questions of jurisdiction and public-agency role requires further consideration. The Path is conceived as an infrastructure effort in the public realm beyond the boundaries of Metro ownership or jurisdiction, therefore Metro's role must be carefully considered. Internal Metro and external stakeholder coordination sessions will be required to further strengthen the Path concept, to coordinate efforts, and identify roles and responsibilities. These guidelines are meant to assist this process.

First-Last Mile Strategic Planning

An individual's "trip" is understood as the entire journey that individual makes from their origin to their destination. An individual may utilize a number of modes of transport to complete their journey; they may walk, drive, ride a bicycle, take a train, or in many cases combine a number of modes. Public transportation agencies typically provide bus, rail and van type services that frame the core of a public transit users' trip, but users must complete the first and last portion on their own; they must first walk, drive or roll themselves to

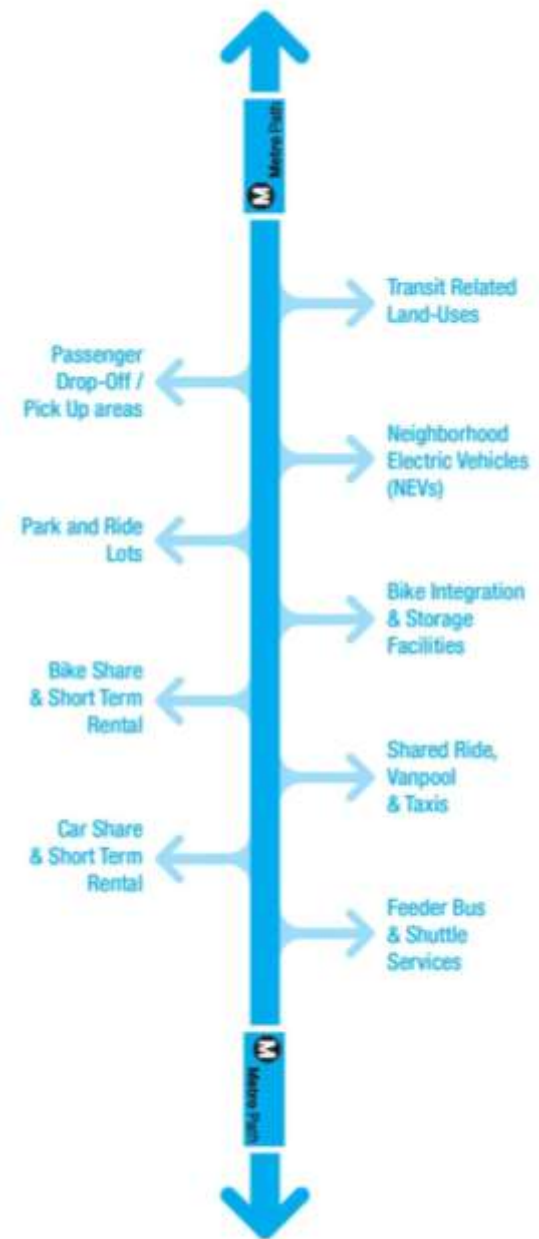
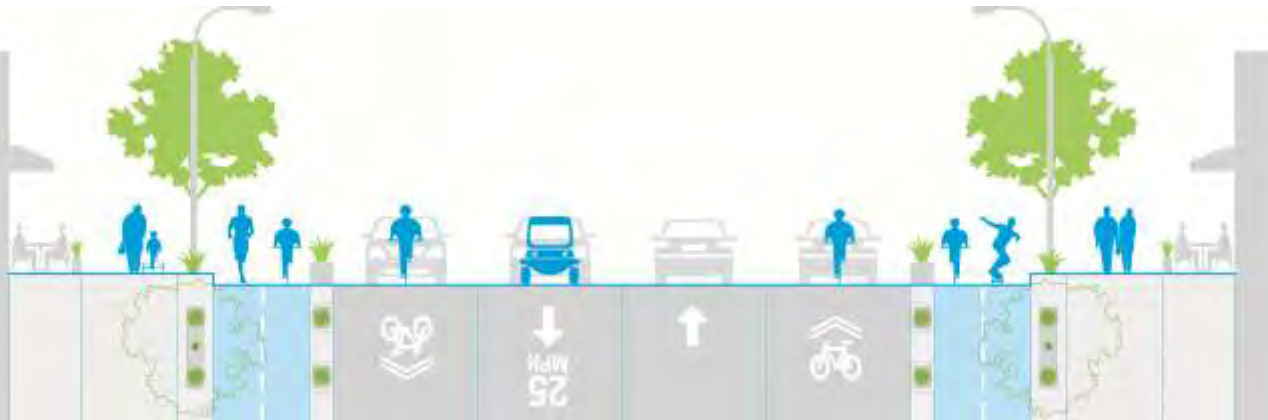
the nearest station. This is referred to as the "first-last mile" of the user's trip. Though this has traditionally fallen outside the boundaries of Metro's jurisdiction and control, it remains a critical component of the effectiveness of the overall public transportation system. Billion dollar rail investments become useless to the transit user who cannot safely or efficiently access their desired station, or make their way from the station to their desired location.



Metro Path Guiding Design Principles

The following attributes define the Metro Path and provide a basis for design:

- 1 The Path is **Safe** – Safety is a key concern, and is supported by protected facilities, improved street crossings, strategic lighting and vehicular speed mitigation.
- 2 The Path is **Intuitive** – Traveling along the Path is an extension of the transit user's experience, and their ability to navigate to and from destinations is assisted by way-finding strategies that support seamless multi-modal journeys.
- 3 The Path is **Universally Accessible** – The Path supports all modes of active transportation and remains accessible to individuals dependent on mobility support devices – from white-canes to wheeled push walkers and electric mobility scooters.
- 4 The Path is **Efficient** – Greater distances are traveled in a given amount of time along the Path. Rolling and walking surfaces are smooth and free of obstacles, routes are direct, and signals reduce waiting times at street crossings.
- 5 The Path is **Fun** – People opt out of cars, and hop on scooters, skateboards and bikes to get to where they want to go, save money, burn calories and along the way, have fun.



Pedestrian Safety

Pedestrian fatality rates for children under age 4 and seniors over age 70 in L.A. are double the national standard.



Pedestrian fatalities represented 36.8% of all traffic fatalities between 1994 & 2000 in L.A., (LADOT)



39% of pedestrian collisions between 1994 and 2000 occurred mid-block (LADOT)



5% of pedestrians die when hit by a vehicle moving at 20 mph or less. (LADOT)



80% of pedestrians die when hit by a vehicle moving at 40 mph or more. (LADOT)



The provision of safe transportation system is a cornerstone of Metro's Vision, and given the fact that most transit users are pedestrians during the first, last and transfer components of their trips, pedestrian safety is a major concern for Metro. Pedestrians are at risk in the environments around transit stations, primarily from automobile traffic. L.A. County has an alarming incidence of fatality rates, especially amongst some of the more transit dependent populations (the very young and very old). Risks can be significantly mitigated through design and vehicular speed control measures, and should be done so along prioritized access routes within station catchment areas.

(See the Illustration above...)

2 PATH USERS

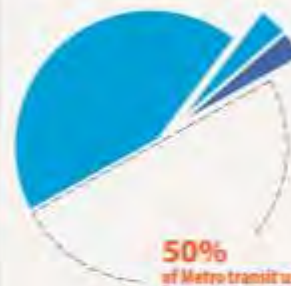
Who Uses The Path?

Planning guidelines for a transportation element must begin with an understanding of the transit user. Metro goes to great lengths to better understand county transit riders in order to improve operations and service. Metro conducts on-board passenger surveys as part of this effort. A review of the Metro 2011 System Wide On-Board Origin-Destination Study provides insights into transit users at a demographic level. Some key findings include:

- 75% of transit riders belong to households earning less than \$25,000.
- Half of all transit riders are transit dependent, i.e., they belong to households that do not own a vehicle.
- Transit dependency increases as age increases, and / or as income decreases.
- Active transportation modes (walking / biking / wheelchair / etc.) are the dominant access and egress modes for all riders, representing 86% of Park/SRRT access and over 90% total system access.

The Metro survey data supports the notion that station access solutions must focus on active transportation mode integration as a foundation to an overall strategy, as the vast majority of people accessing transit are doing so on foot. Additionally, many of those who rely on transit have no other option; they either have no access to an automobile, or they cannot afford costly access options such as taking a taxi cab. These are people accessing transit by other means (i.e. being dropped off, driving and parking, van pool), and an enhanced active transportation network can allow the physical components of those strategies (i.e. drop off/pick-up locations, parking structures) to be geographically located in a strategic manner. For example, currently Metro park-and-ride lots are typically located right at the station, on the highest valued TOD property. The parking could become freighted (and dispersed throughout a larger area) in order to better maximize development potential if the new fragmented lots had clearly demarcated access routes to station portals.

Mobility Choice



2011 Metro On-Board Survey

Half of LA County transit riders surveyed informed Metro that they are transit dependent. 60% of those respondents are 65 years or older, suggesting that the transit dependent share of riders will rise as the population ages. Mobility freedom allows aging in place, and access to regional job markets for those who either cannot afford or choose not to own an automobile. The provision of universally accessible active transportation networks that link to Metro Park/SRRT stations is an essential component of an efficient and effective transportation system that responds to actual users.

3 NETWORK IDENTIFICATION & DESIGN

This chapter outlines a methodology for designing the Path network at transit stations. The three steps include:



1. Define Site Area

The first step in designing the Path in any given station area is to identify the location and limits of the network. There is a current active transportation network throughout the county, comprised of sidewalks, roadways, street lights, signage, stoppings, signals and a number of other elements. The Path will build upon these existing conditions within pre-determined zones, which emanate from selected transit stations. The Path focuses on pre-determined access routes bounded by identified access sheds.

The center of the site area where the Path network will be located is the transit station itself, Metro Rail or BRT. Maintaining consistency with FTA policy, one-half mile and three mile (pedestrian and bicycle) circles can be drawn

around the station which will correspond to important potential thresholds of the Path. The first threshold occurs at the half mile mark, measured as the crow flies, and corresponds to how far a person will walk to access transit. The second three mile threshold corresponds to how far an individual will bike to access transit. The three mile shed, gives a good limit for all other active transportation users (i.e. skateboarders, mobility scooter riders) as bicycles operate at the upper range of observed speeds across active transportation devices. These thresholds correspond to a number of funding mechanisms given FTA's stated policy. The limits of fully integrated Path active transportation improvements align with FTA policy.

Land Use Map

The Land Use Map depicts concentrations of land use within each 1/2-mile radius. The land use map highlights the types and characteristics of users that are able to comfortably access the locations surrounding the station.

Bicycle Connections

All infrastructure dedicated to bicycles in the roadway are shown in the Bicycle Connections map. This generally includes: existing bike lanes, shoreways, separated bike facilities, bike friendly streets (in some areas where others have defined this as a category), human bike routes, etc. These maps should also include a review of the three mile access shed map.

Transit Connections

Using Metro and other transit agency data, routes of all transit modes are mapped within the 1/2-mile radius. This includes all bus lines, light and heavy rail, and any other transit lines serving the station area. These maps should also include a review of the three mile access shed.

Statistics

The following statistics were extracted from each station area to provide an overview of the site: average block length, intersection density, walk score, overlay zones, density, employment, and journey to work.

B. Access Barriers Overlay Map

After compiling the information collected during the region-level station area analysis, the maps described above can be overlaid to show potential areas of intervention. The overlays described below provided substantial information that inform on-the-ground analysis:

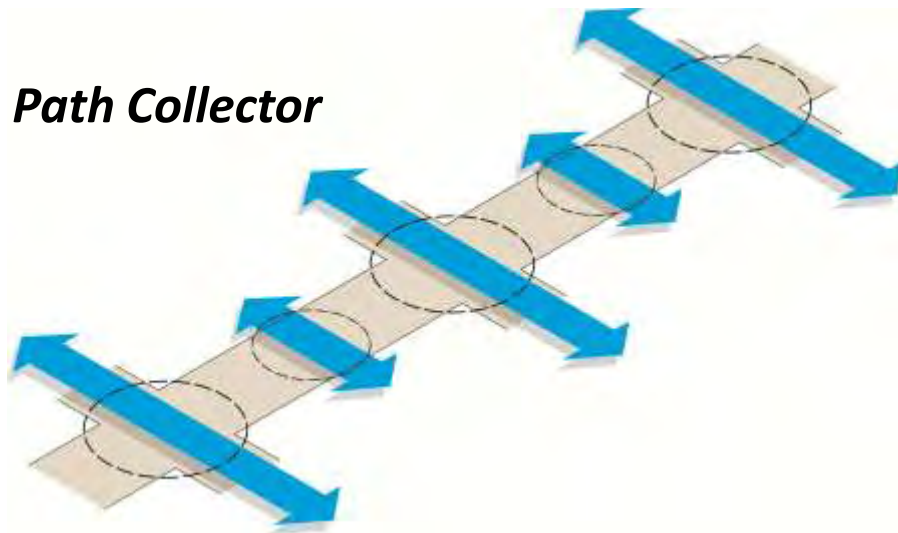
Overlay of land use map with pedestrian shed map

To begin, the station land use map can be overlaid with the pedestrian shed map. Here, any holes that exist within the 1/2-mile radius that would provide a logical origin/destination route for potential users can be highlighted. For example, when heavy residential land uses on an area of the map do not connect to the 1/2-mile pedestrian shed, a note can be made, and the area highlighted.

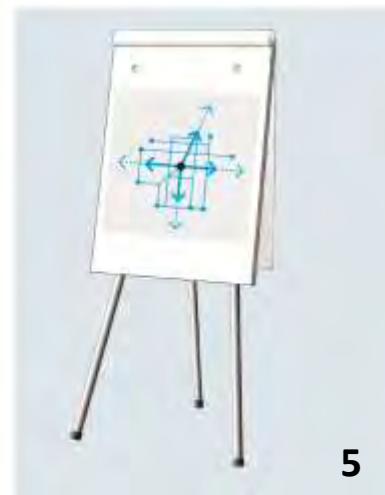
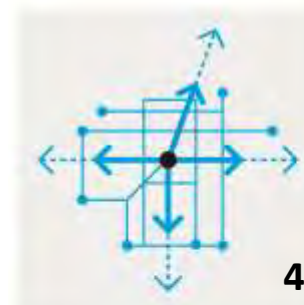
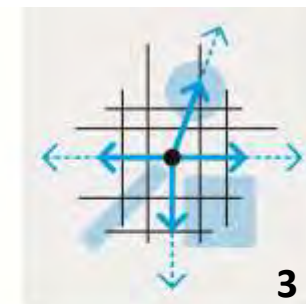
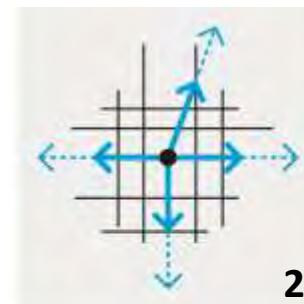
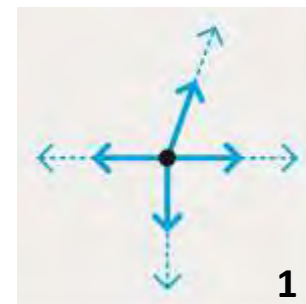
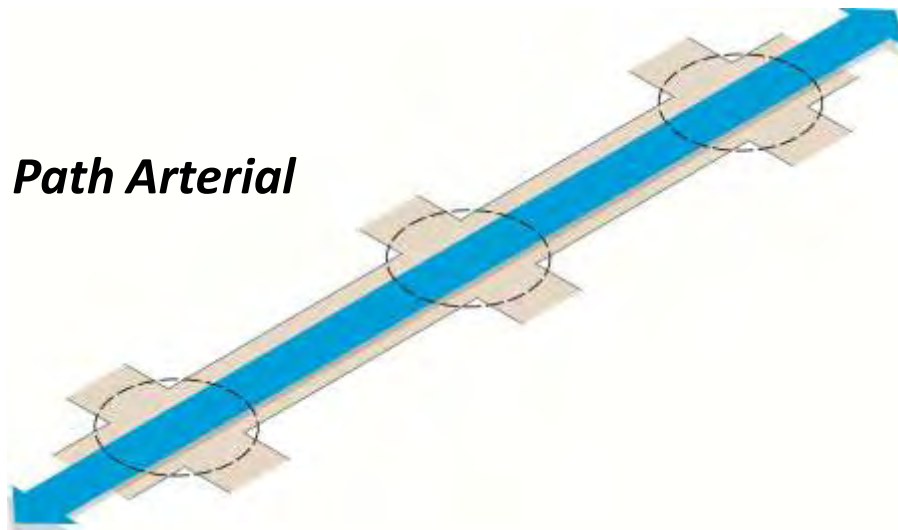
Overlay land use map with bicycle connections map

This second step is to overlay the station land use map with the bicycle connections map. The holes shown in these maps account for areas that are missing connections for bicycle riders.

Path Collector



Path Arterial



Critical Access Barriers in Los Angeles

Long Blocks – Pedestrians prefer direct routes to their destination – long blocks often require to unnecessarily long walks. A typical walkable block is 300-400 ft, while many blocks throughout Los Angeles stretch over 1,000 ft long without crossings.



Freeways – Freeways carve our region into a number of "pedestrian islands". Links between these islands are effectively broken by dark and unpleasant underpasses or equally challenging overpasses. Addressing the problem means addressing the safety concerns and the experience of the pedestrian as he or she passes over or under the vehicular space.



Maintenance – Many of our basic pedestrian walking surfaces are buckled, broken and generally impassable to all but the nimble footed. Improving the first and last mile connection includes upkeeping current infrastructure, repaving, fixing sidewalks, clearing, etc.



Safety and Security – Pedestrians in Los Angeles are victim to some of the highest pedestrian fatality rates in the country. The neglect of our pedestrian infrastructure impacts personal security as does a dearth of eyes on the street. Also of critical importance is the user's perception of safety.



Legibility – It is too easy to get lost in Los Angeles. Effective transit systems utilize sophisticated yet simple signage and way-finding strategies to tell people where and how to get to their destinations as well as where and how to get to the station itself.



Right of Way Allocation (ROW) and Design

– Traffic congestion along some arteries crowds out all but the most fearless bike riders – on other streets wide roads are underutilized, and all active modes are relegated to a 4 foot wide broken strip of concrete. A more balanced ROW allocation is needed. Similarly, the emphasis put on the design and human experience of the urban realm is lacking.



These planning guidelines present a curated set of urban design components that directly relate to the development of the Metro Path concept, rather than an exhaustive list of what makes for a great public realm. The components chosen respond to our specific challenges here and now, and how we can make a more dignified transit-to-destination link, one that is safer and better maintained, more inclusive, efficient, and helpful, effectively expanding the transit station corridor.

Introduction

Over the last decade, urban design guidance for improving and managing public space has proliferated. From an increased emphasis on protecting walkability and active living for people of all ages and abilities, to a renewed interest in biking and other "alternative modes" of transportation, cities, transit agencies, and stakeholders are demanding, and planning for, a more responsive and flexible urban environment. The planning components presented in this chapter focus on improving one core piece of this "new" urbanism – the first mile and last mile around Metro stations, in particular rail stations throughout Los Angeles County, which forms a distinct set of transit access barriers. Described previously in Chapter 1 and discussed on the following pages, Los Angeles' Critical Transit Access Barriers acknowledge that the ultimate user of the transit system is the human, not the vehicle. If the end goal for Metro is to expand the reach of transit, and increase ridership, the public realm around transit stations must be improved to be more responsive to people on foot, on bikes, and using alternative modes to get to the station.

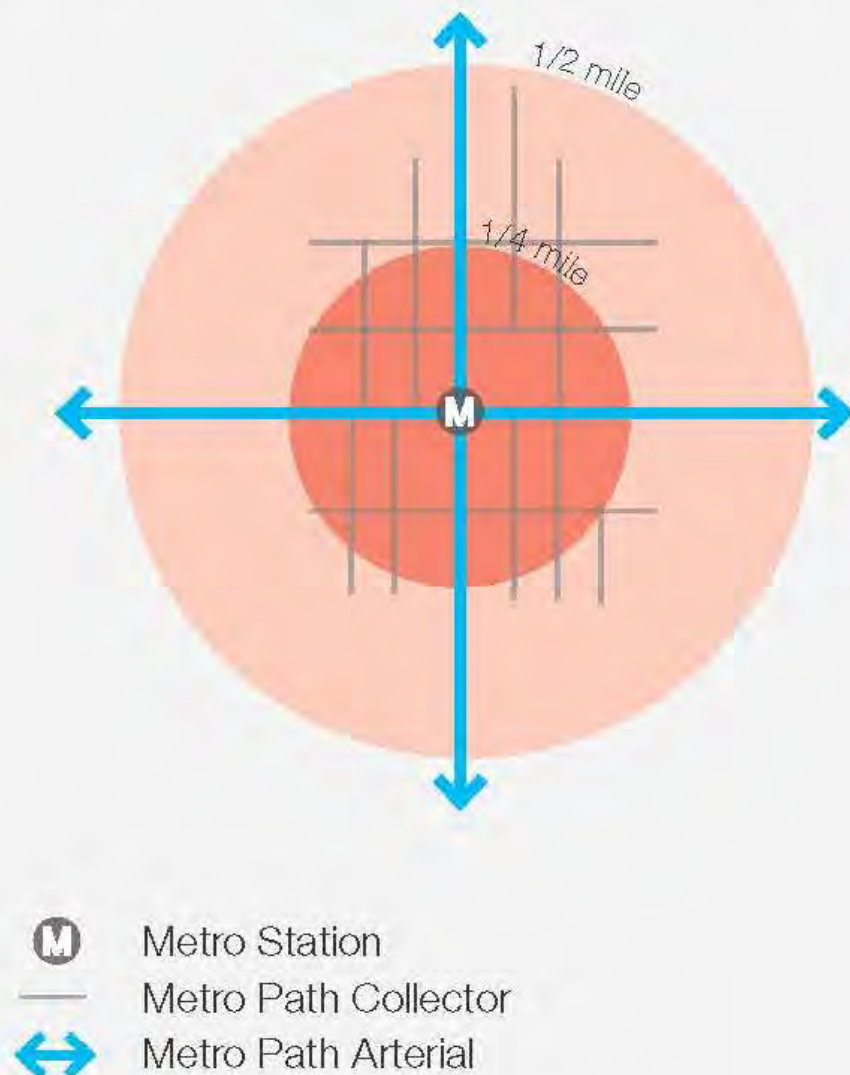
The guidelines focus on six categories of improvements as part of the Metro Path:

- Crossing Enhancements and Connections
- Signage and Wayfinding
- Dignity and Design
- Reallocation of the Streetspace
- Integrated Transit Access Solutions
- Traffic Calming

Each component has been chosen based on how broadly it responds to the needs of different types of transit riders, in terms of age, abilities, gender, and mode of travel – e.g. on foot, stroller, bike, bus, shared vehicle, etc.

Refer to Chapter 3 of these guidelines for information on how the Metro Path is defined at station areas and what street type and connections the Metro Path consists of.

Expanding the Sphere of Influence



EXTENDED STATION ZONE (AREA 1)

5-Minute Walk / 2-Minute Bike

- Metro Path is more visible
- Enhanced safety features
- Larger, more prominent Metro Path signage
- Directional markers with time-to-station signage
- Frequent crossings
- Train time arrival/departure digital displays

TRANSIT-FRIENDLY ZONE (AREA 2)

10-Minute Walk / 5-Minute Bike

- Less overt, more passive wayfinding & Metro Path markers
- Address the most pressing safety & access improvements, such as:
 - New crossings
 - Curb ramps
 - Maintenance
 - Lighting & landscaping

Metro Path Components

Metro Path Components include:

Crossing Enhancements and Connections

- Enhancement of existing crossings
- Mid-block and additional crossings
- Raised crossings
- Cut-throughs and shortcuts
- Curb extensions at intersections
- Scramble crossings

Signage and Wayfinding

- Pylon signage
- Medallion signage
- Curb-edge banding
- Time-to-station notation
- Real-time signage, next train/bus
- Smart technologies

Traffic Calming

- Signal modification
- Other traffic calming

Dignity and Design

- Street furniture
- Landscaping / shade
- Lighting
- Enhanced freeway underpasses / overpasses
- Enhanced bus waiting areas
- Dual curb ramps

Re-Allocation of the Streetspace

- The "Green Zone"
- Sidewalk widening
- The "Rolling Lane"

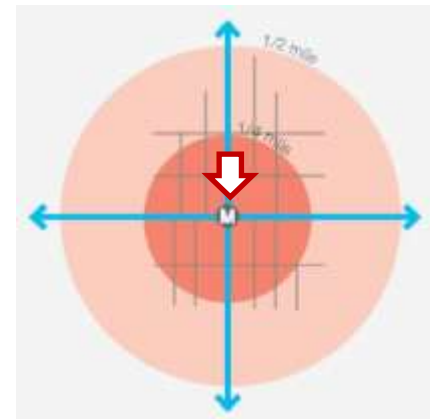
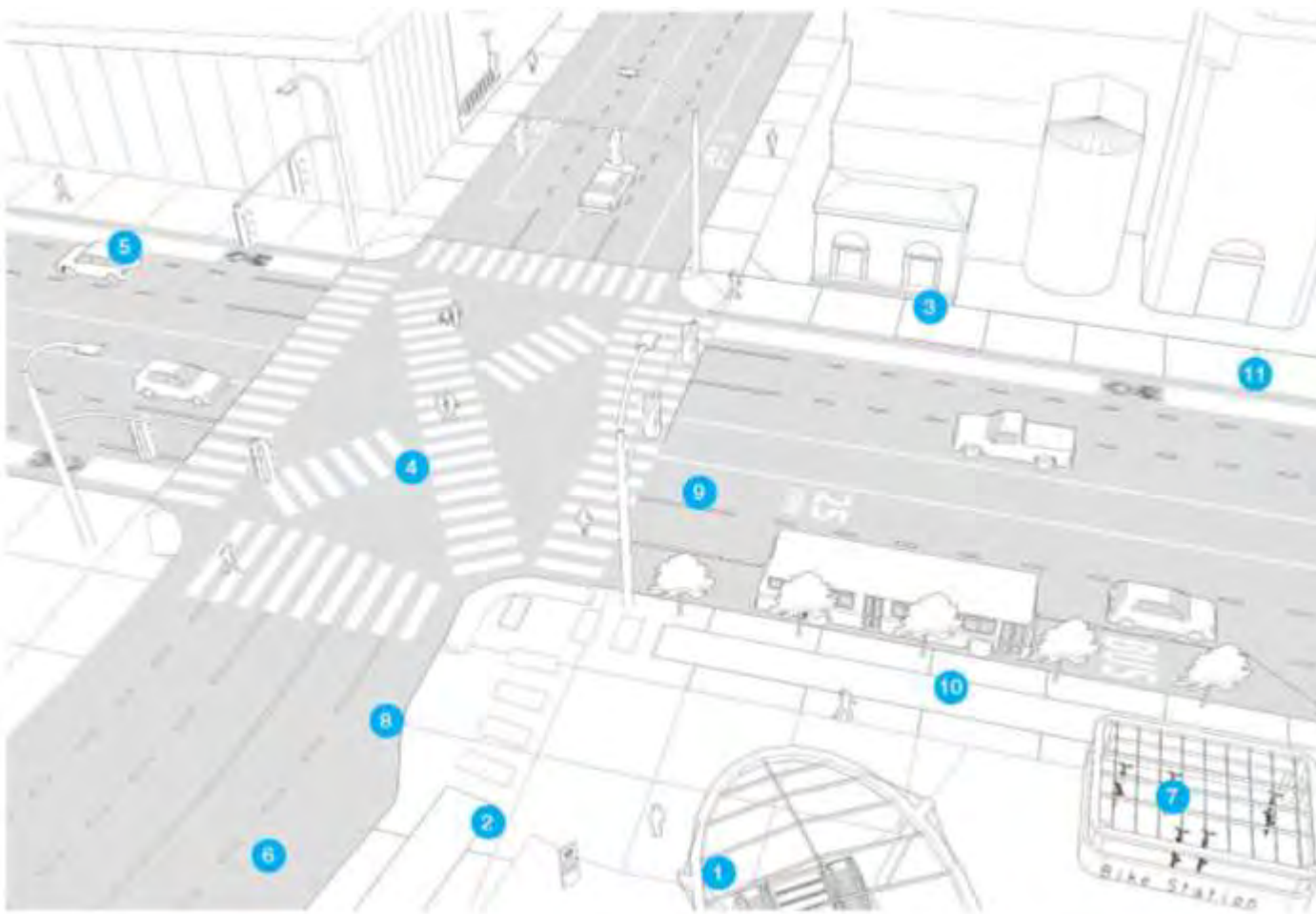
Integrated Transit Access Solutions

- Bike share / Bike station
- Car share
- Neighborhood Electric Vehicles (NEVs)
- Kiss and Ride
- Micro Park and Ride
- Van pool / feeder bus

EXAMPLE METRO PATH COMPONENTS

Extended Station Zone

- 1 Metro Station Portal and Plaza
- 2 Pylon Signage with Real-Time Transit Information
- 3 Medallion Signage and Curb-Edge Banding
- 4 Colored Scramble Crossings
- 5 Advisory Bike Lane (see "Rolling Lane")
- 6 "Green Zone" and Kiss-and-Ride
- 7 Bike Share / Bike Station
- 8 Bulb-outs at Intersections
- 9 Traffic Calming
- 10 Enhanced Bus Facilities
- 11 Sidewalk Widening

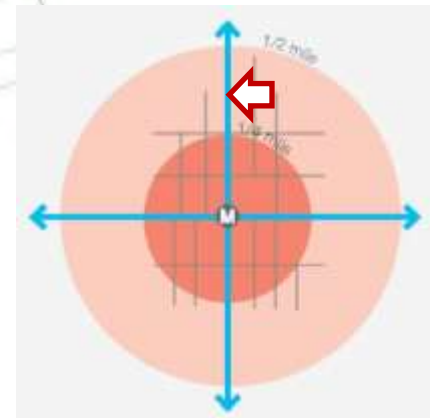


Path Components – Extended Station Zone

EXAMPLE METRO PATH COMPONENTS

Transit-Friendly Zone

- 1 Medallion Signage and Curb-Edge Banding
- 2 Continental Crosswalks
- 3 "Rolling Lane"
- 4 Car Share
- 5 Micro Park-and-Ride
- 6 Van Pool
- 7 Dual Curb Ramps
- 8 Signal Modifications
- 9 Pedestrian Lighting
- 10 Landscaping

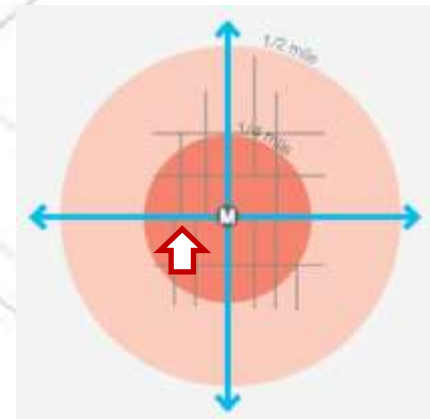


Path Components – Transit Friendly Zone

EXAMPLE METRO PATH COMPONENTS

Mid-Block Crossing

- 1 Added Mid-Block Crossing
- 2 Cut-Through / Shortcut
- 3 Pylon Signage with Directional Arrows
- 4 Medallion Signage and Curb-Edge Banding
- 5 Street Furniture
- 6 Landscaping
- 7 Lighting
- 8 "Rolling Lane" / Protected Bike Lane
- 9 Signal Modifications
- 10 Bike Share



Path Components – Mid-Block Crossing

How to Use this Guide

Category Labels each Component with one of the six categories; Crossing Enhancements and Connections; Signage and Wayfinding; Dignity and Design; Reallocation of the Streetspace; Integrated Transit Access Solutions; and Traffic Calming.

Component Name of Component.

Goal Describes what the Component should aim to do and who it should serve.

Guidelines and Resources Defines the Component. Guidelines presented focus on those aspects of design and planning that are particularly transit-supportive, rather than describing the full universe of good design standards or common best practices. References are included for other design and planning guidance. See the end of this chapter for a full list of references.

Metro Path Integration Identifies elements that can be used to identify or "brand" the Component as part of the Metro Path, which would be recognizable to the transit rider.

Metro Path Network Compatibility Identifies which path type - whether Collector, Arterial, or Cut-Through - the Component should go, along with which sphere of influence - Area 1, the "Extended Station Zone" or Area 2, the "Transit Friendly Zone."

Issues Addressed Shows how the Component responds to the six critical Station Access Barriers, that identify which problem(s) it helps solve.

CROSSINGS AND CONNECTIONS

Cut-Throughs and Shortcuts



Goals

- Provide more direct routes to and from the station.

Guidelines & Resources

- Design shortcut paths with special paving, lighting, bollards, and shade so that they are inviting to pedestrians of varying ages and abilities.
- Design shortcut paths to accommodate bicyclists and other active transportation users with a sufficiently wide pathway and smooth surface.
- Use directional signage to the stations at entrances to shortcuts.
- If located in the middle of the block, design shortcut paths that lead to a mid-block crossing for easier access across streets.
- Make sure that pathways are well-maintained, well lit, and located in "people-friendly" places, i.e. places that are well-traveled, highly visible, and pedestrian-oriented.
- Maintain existing cut-throughs and add safety enhancements.

Metro Path Integration

- Use Metro Path signage at entrances and decision points.
- Regularly place branded Metro station signage to the length of the pathway, every 60-100 ft approx.

Station Access Barriers Addressed:	Component Appropriate For Use On:
<input checked="" type="checkbox"/> Long Blocks	<input type="checkbox"/> Arterial 1
<input checked="" type="checkbox"/> Freeways	<input type="checkbox"/> Collector 1
<input checked="" type="checkbox"/> Maintenance	<input type="checkbox"/> Arterial 2
<input checked="" type="checkbox"/> Safety and Security	<input type="checkbox"/> Collector 2
<input checked="" type="checkbox"/> Usability	<input checked="" type="checkbox"/> Cut-Through
<input type="checkbox"/> PDV Allocation and Design	

RE-ALLOCATION OF THE STREETSPACE

[Case Study] Rolling Lanes

The idea of "Rolling Lanes" is to reorganize the street space to accommodate a wide spectrum of active transportation users, giving both more and better space and safer facilities. Internationally, cities are introducing their own versions of "Rolling Lanes." Read below for precedents.

Copenhagen¹¹

In 2019, the City of Copenhagen introduced the "Conversation Lane", a throughway that aims to solve conflicts that arise as a result of varying mobility speeds. Citing the increase in electric bicycle sales and the ever-expanding range of mobility "rolling" options, designers have called the Conversation Lane a "social cycle path", which will allocate more space for alternative transit modes.

Given the natural, self-organizing tendency of bicycle movements (faster traffic moves to the left while slower traffic shifts to the right), designers chose to allow "unusually wide social cycle paths" to accommodate a wider range of users. Additionally, the proposed program utilizes advancements in information technology by incorporating speed detecting signs that direct users to shift lanes depending on their independent speeds.

Conversation lanes are designed to give cyclists room to travel comfortably beside each other and will be designed alongside a "fast lane", a separated bicycle facility for cyclists wishing to pass or move faster than "normal" speed cyclists.



Conversation Lanes, Copenhagen

The Netherlands¹²

Similarly, in the Netherlands, the Dutch Ministry for Infrastructure and the Environment allocated €2.1 billion to build wide, "high-capacity" cycle routes to reduce overall cycling trip time. Named "Rijdsplein" (Queue-Free Cycling), the program is aimed to attract cyclists that experience congestion on cycle routes.



Queue-Free Cycling in the Netherlands

Copenhagen has committed to the goal of providing conversation lanes alongside 80% of their already established cycle routes, ultimately encouraging riders of all speeds and levels to embrace the city's cycling culture.

INTEGRATED TRANSIT ACCESS SOLUTIONS

Van Pool & Feeder Bus



Goals

- Increase connectivity to Metro stations
- Increase low-cost public transportation options, especially for commuters
- Reduce Vehicle Miles of Travel (VMT) and Greenhouse Gas (GHG) emissions
- Reduce traffic by decreasing the number of cars on the road

Guidelines & Resources

- Locate pick-up / drop-off areas for van pool and feeder bus in the "Green Zone" or in another highly-visible and convenient location
- Retrofit existing feeder bus stops and van pools with Metro Path signage
- Resource: See Emery Go-Round or LA DASH

Metro Path Integration

- Use Metro Path signage at van pool / feeder bus pick up / drop off locations and to and from these areas as directional indicators to the station

[Precedents] Integrated Access Solutions



Philly CarShare, Philadelphia, PA



Carshare electric vehicle charging station, Portland, OR



Feeder Bus: Emery Go-Round, Emeryville, CA

Station Access Barriers Addressed

- ☐ Long Blocks
- ☐ Freeways
- ☐ Maintenance
- ☐ Safety and Security
- ☐ Legibility
- ☒ ROW Allocation and Design

Component Appropriate For Use On:

- ☒ Arterial 1
- ☒ Collector 1
- ☐ Arterial 2
- ☐ Collector 2
- ☐ Out-Through

SIGNAGE AND WAYFINDING

Pylon Signage



Goals

- Increase visibility and awareness of proximity to transit station
- Display paths of travel to station and to local destinations
- Increase legibility of the urban landscape
- Help brand the Metro Path with distinctive elements that are recognizable

Guidelines & Resources

- Place pylons on major corners and decision points, regularly spaced along a route approximately 200-300 ft. apart
- Use pylons that relate to Metro's established family of signage
- Ensure that pylons are pedestrian-scaled and oriented
- Use arrows and maps on these signs to highlight station location, common destination areas, and routes
- Consider the potential to stamp or stencil the Metro "M" at corners on the sidewalk
- Resource: Legible London: A Wayfinding Study

Metro Path Integration

- Use colors and pylon design that reflect the Metro Path brand and design

Station Access Barriers Addressed

- ☐ Long Blocks
- ☐ Freeways
- ☐ Maintenance
- ☐ Safety and Security
- ☒ Legibility
- ☐ ROW Allocation and Design

Component Appropriate For Use On:

- ☒ Arterial 1
- ☐ Collector 1
- ☐ Arterial 2
- ☐ Collector 2
- ☒ Cut-Through

[Case Study] Legible London¹

Legible London is a city-wide, comprehensive, and intuitive wayfinding strategy in the city of London. Along with clear pylon signage, the program is coupled with simple navigational maps that depict average distances to and from key destinations and streets. The success of Legible London has made it an international model for wayfinding design. After an initial roll-out of the system in strategic locations in the heart of the city, a complete survey of the program has shown that it has had positive and impactful results. Select statistical findings confirm that:

- 83% of users acknowledge that the wayfinding system has helped them navigate the city
- The reported number of pedestrians getting lost on a journey fell by 65%
- 83% of users support a full roll-out of Legible London throughout the city

Legible London has also introduced new wayfinding tools that increase user legibility. Large key maps are complemented by in-road placard signage, traditional "finger-posts", and taller, narrow posts that are placed in heavily congested areas.



Rather than orienting north to the top, Legible London uses "heads-up" mapping, a system that orients maps to face the same way the user is facing.

DIGNITY AND DESIGN

Lighting



Goals

- Increase safety and aid in night navigation for active transportation users along the Metro Path

Guidelines & Resources

- Provide pedestrian-oriented light fixtures along sidewalks, spaced as needed, approximately every 30 feet on center
- Install lighting rhythmically and consistently in coordination with existing street light pattern
- Assume that lights are not located within tree canopies, which may block the light
- Maintain existing light fixtures on street
- Consider installing lights that are efficient and/or motion activated ("self-powered") in areas where constant light is not needed
- Provide uniform light levels along the sidewalk and assure that other paths of travel for active transportation users are also well-lit

Metro Path Integration

- Closer to the station, wrap pedestrian light poles with stripes and/or Metro Path color palette so that visually the poles guide the active transportation user down the pathway

Station Access Barriers Addressed

- ☐ Long Blocks
- ☐ Freeways
- ☐ Maintenance
- ☒ Safety and Security
- ☒ Legibility
- ☐ ROW Allocation and Design

Component Appropriate For Use On:

- ☒ Arterial 1
- ☐ Collector 1
- ☒ Arterial 2
- ☐ Collector 2
- ☒ Cut-Through

[Case Study] Active Lights²⁰

Motion Activated, Solar Pedestrian Lighting

Quality pedestrian lighting ensures a safe environment for pedestrians and active transportation users alike. With regularly spaced pedestrian lighting comes increased visibility, perception of safety, and eyes-on-the-street.

New pedestrian lighting strategies involve creative ways to light up the active transportation path network. For example, a number of cities in Sweden have been using "Active Lights". The design incorporates an LED lighting system that is motion activated to provide security and lighting for those who pass by. "Using solar energy, this system is self-powered and extremely cost effective."



Active Lights in Sweden



Active Lights in Sweden

Studies of the Active Lights show a 65% reduction in nighttime fatal accidents, a 30% reduction in nighttime injury accidents, and a 15% reduction in nighttime property-damage-only accidents.

Wilshire Blvd. and S. Normandie Ave.

For Illustrative Purposes Only



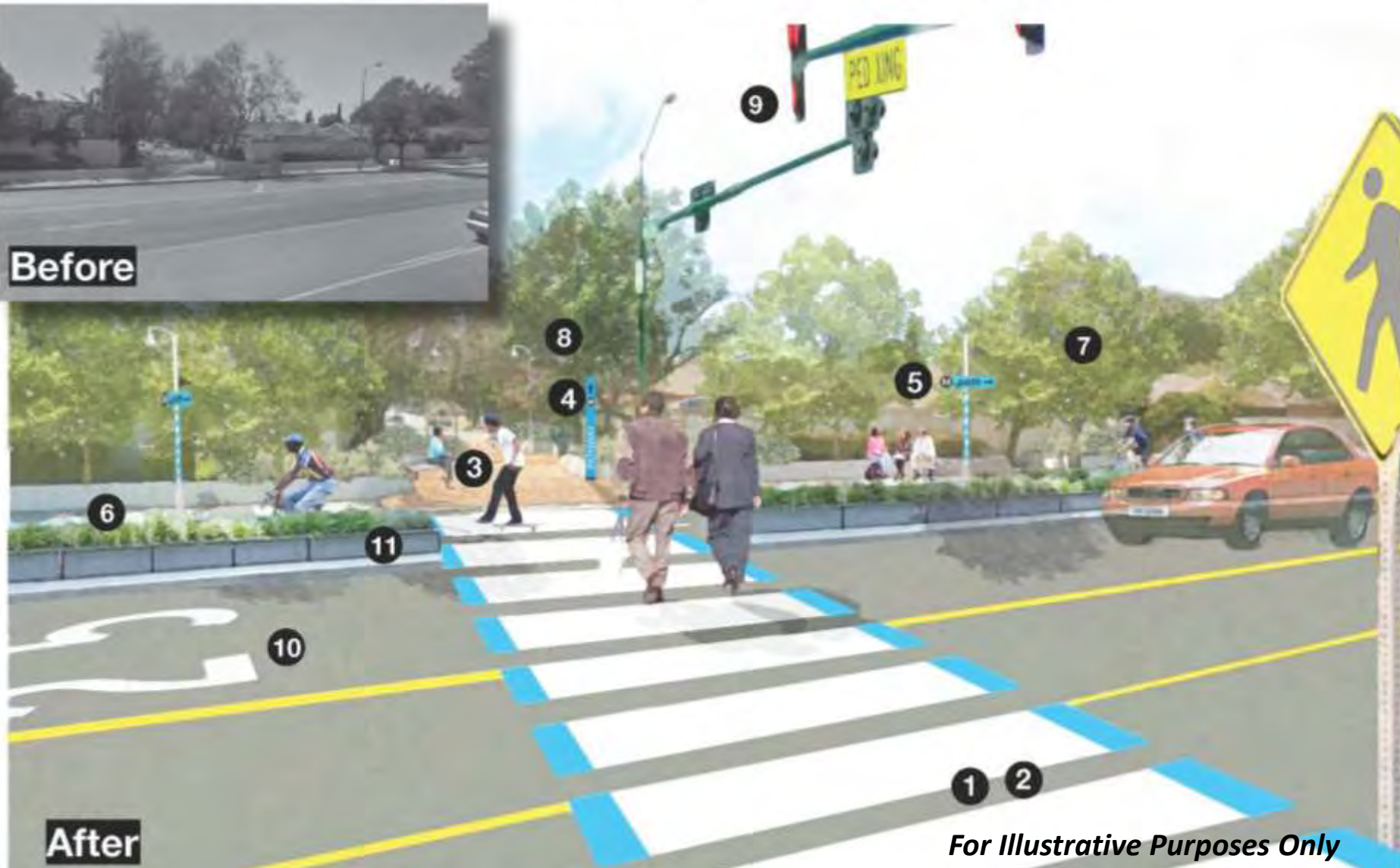
Path Illustrations

103rd/Watts Station, Location 1

103rd Place and Wilmington Avenue - More-intensive variation, vertical separation along Rolling Lane



Before



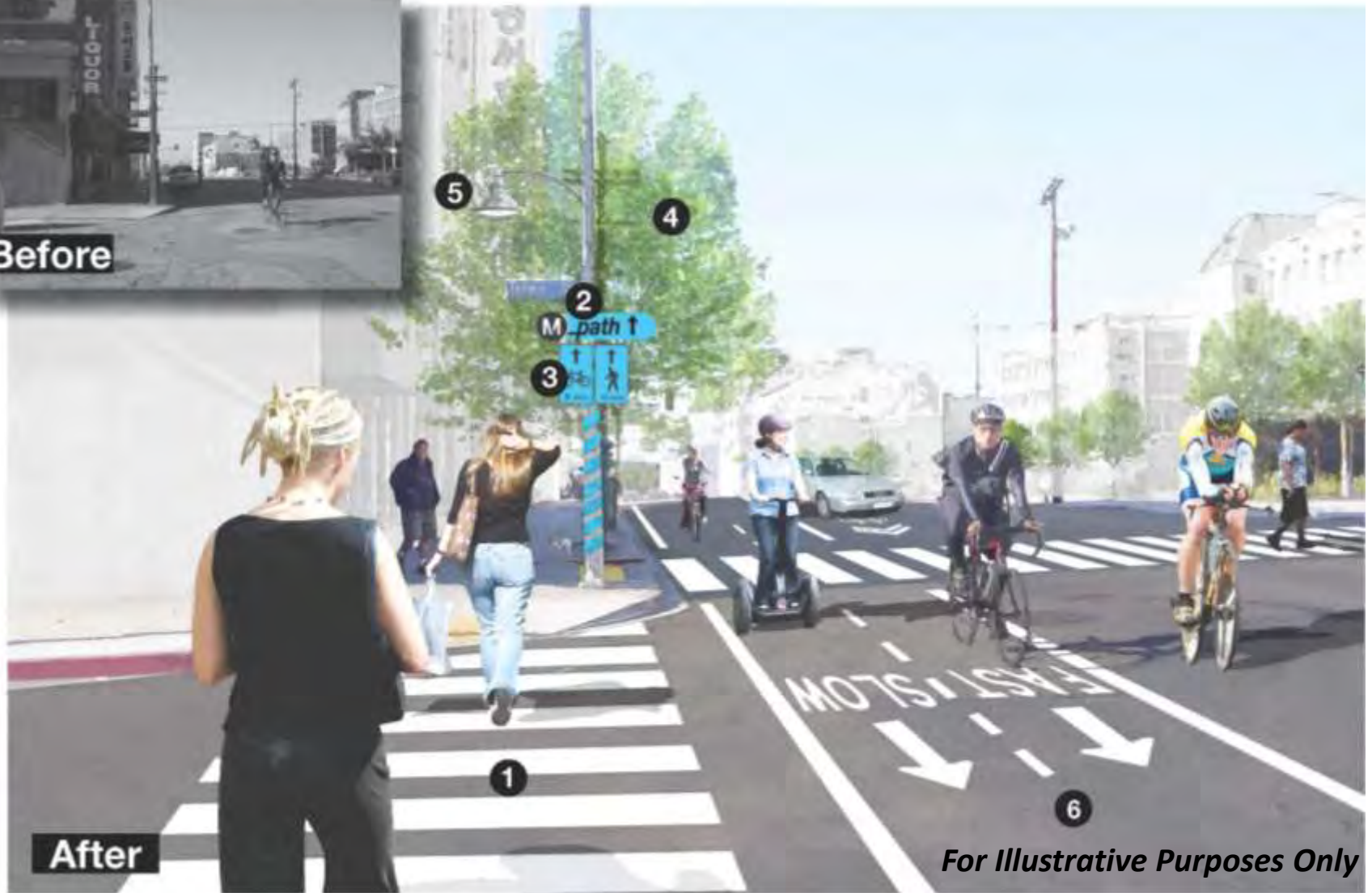
For Illustrative Purposes Only

M

Path Illustrations

Wilshire Normandie Station, Location 2

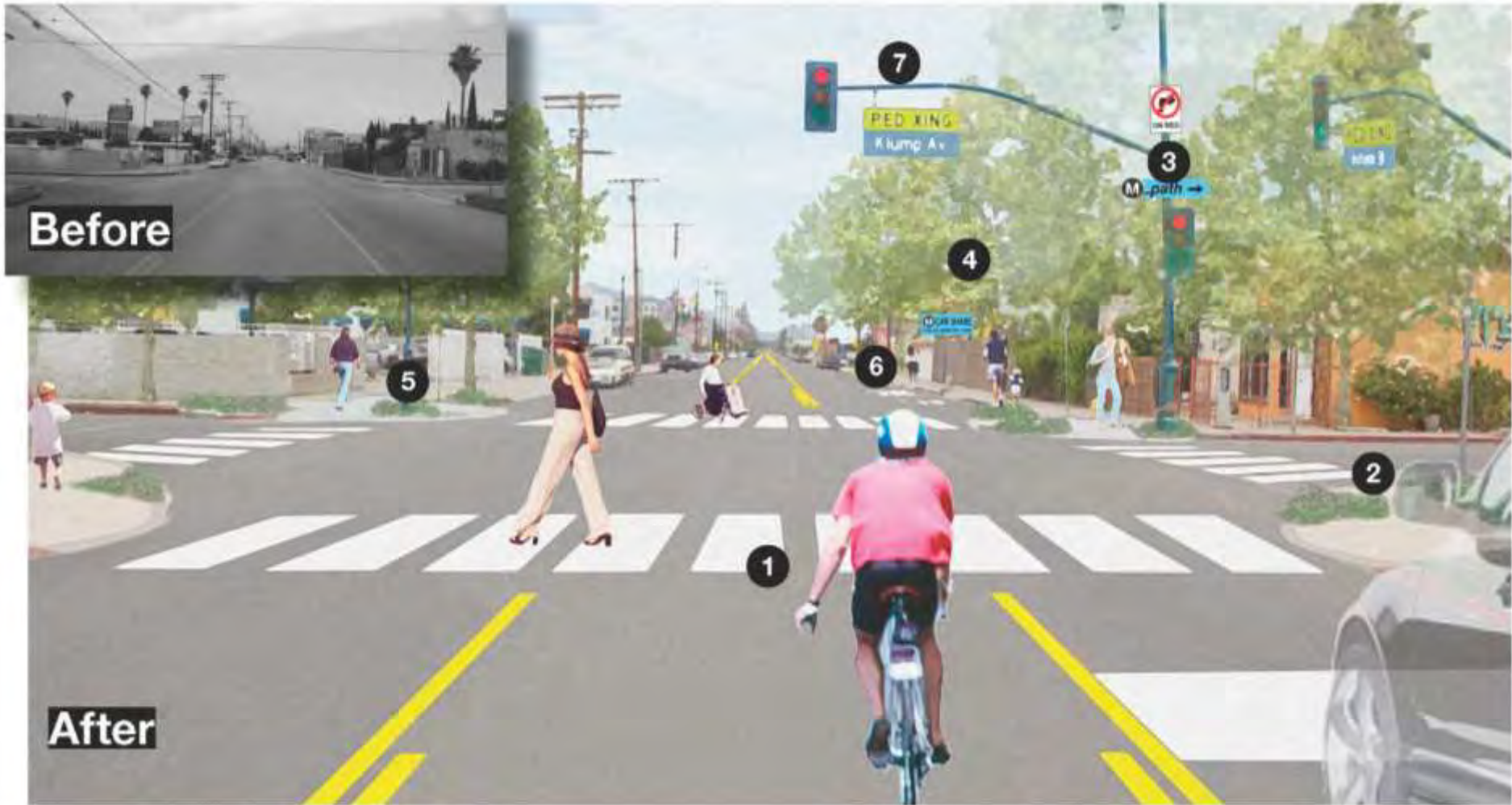
8th St. and Fedora St.



Path Illustrations

North Hollywood Station, Location 2

Burbank Blvd. and Klump Ave.



For Illustrative Purposes Only



Path Illustrations

Magnolia Ave. Underpass

Before

After

For Illustrative Purposes Only

For Illustrative Purposes Only



Path Illustrations

North Hollywood Station, Location 4

NoHo Park at Magnolia Avenue



For Illustrative Purposes Only



Path Illustrations

Discussion Points:



- Partnering
 - Financing
 - Policy Development
- Implementation
- Critical *Path* Components
- System vs. Local Approach (Consistent vs. Variable)
- Recommendations & Next Steps

SCAG's Map Book: Land Use Resource for Local Jurisdictions

Kimberly Clark
Senior Regional Planner
Southern California Association of Governments
August 21, 2013



SCAG Map Book



WHAT MAP BOOK?

Collection of Jurisdictional Level Land Use Maps

Information Resource for Local Jurisdictions

Tool to Solicit Input on SCAG's Datasets

**Helps to Fulfill Land Use Information
Considerations of SB 375**

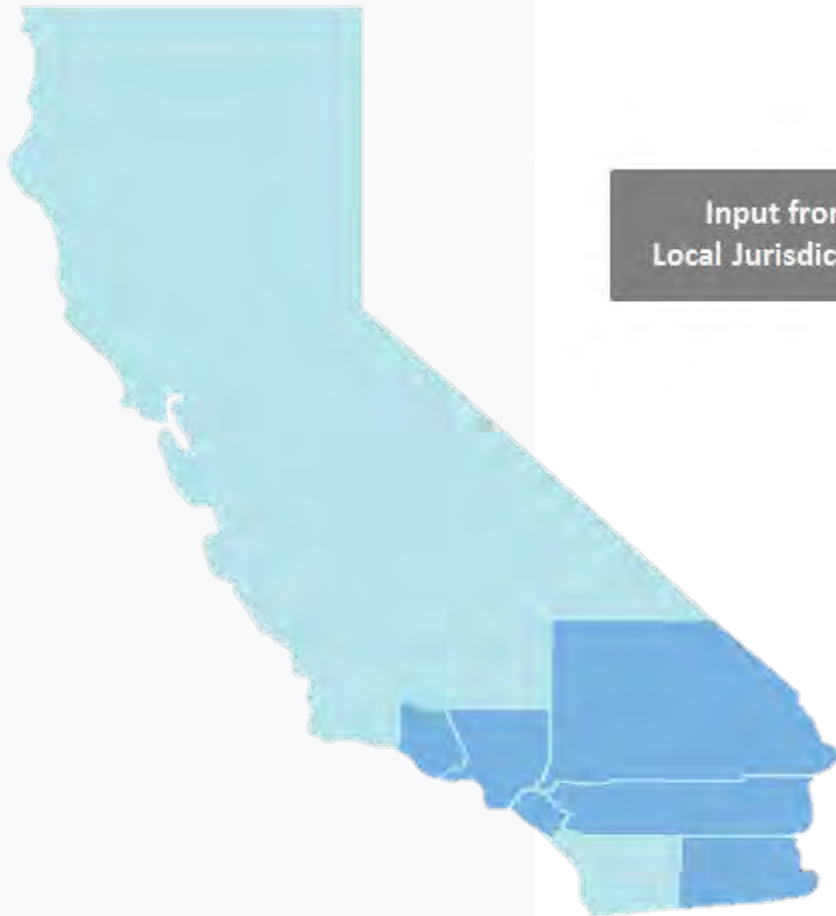
**Individual Books are Available
for Each Jurisdiction**

**Input is Requested by
September 13th, 2013**

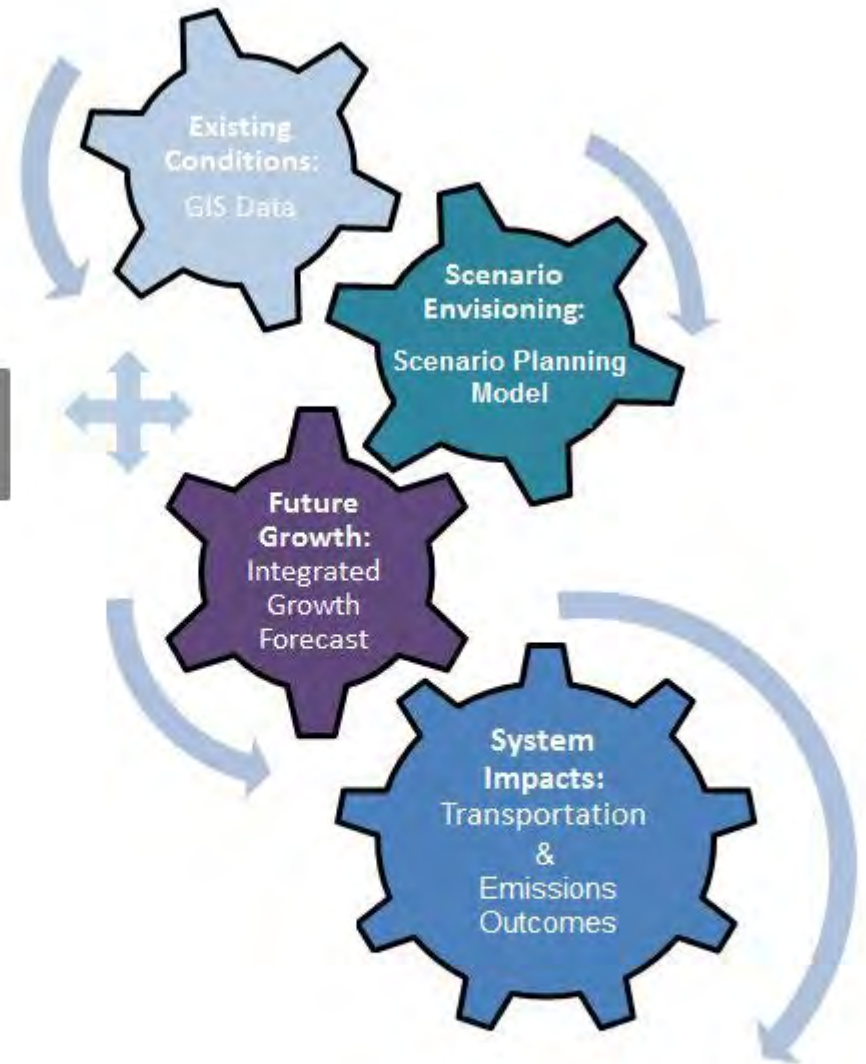


**SOUTHERN CALIFORNIA
ASSOCIATION of GOVERNMENTS**

HOW DOES THIS FIT IN SCAG'S PROCESS?

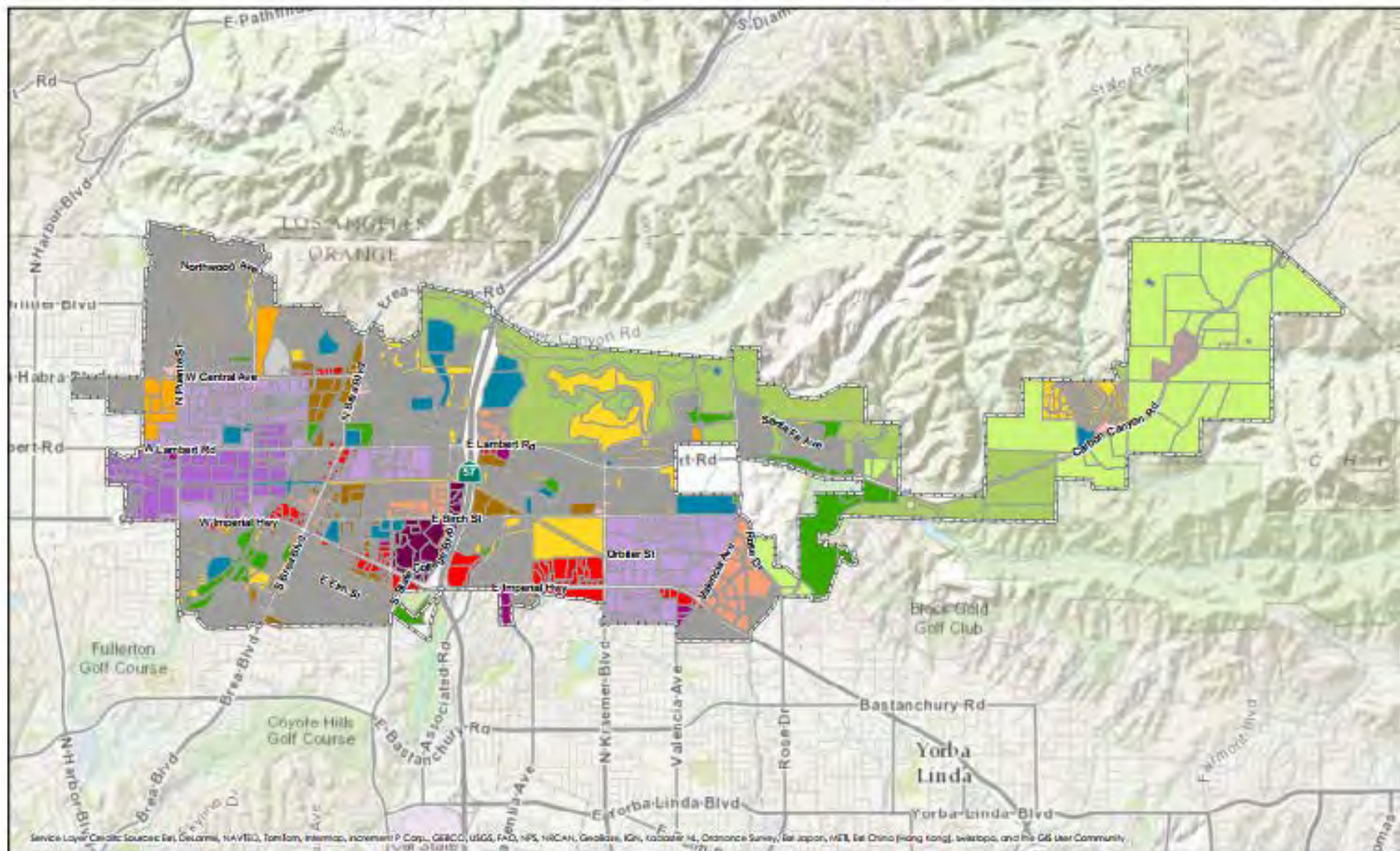


Input from
Local Jurisdictions

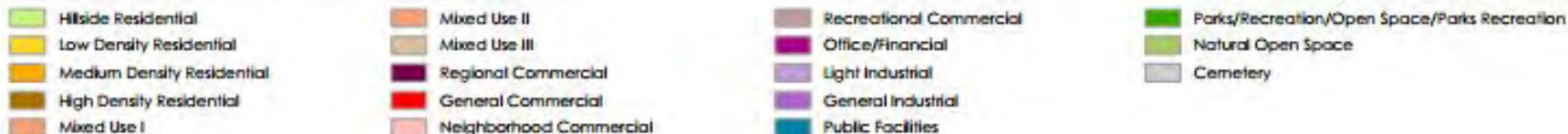


**Regional Transportation Plan &
Sustainable Communities Strategy**

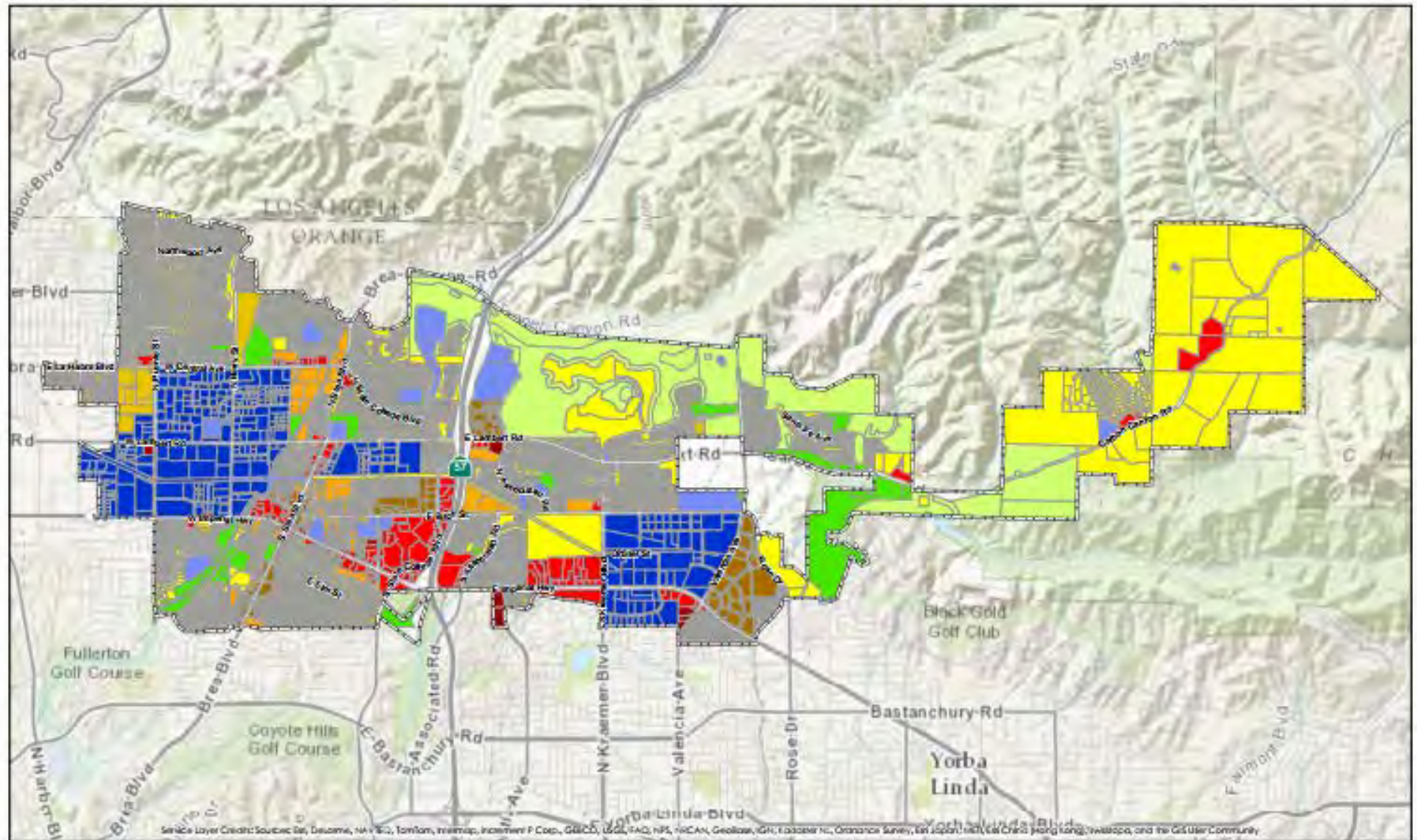
General Plan Land Use in City of Brea



General Plan Land Use Designations of the City of Brea



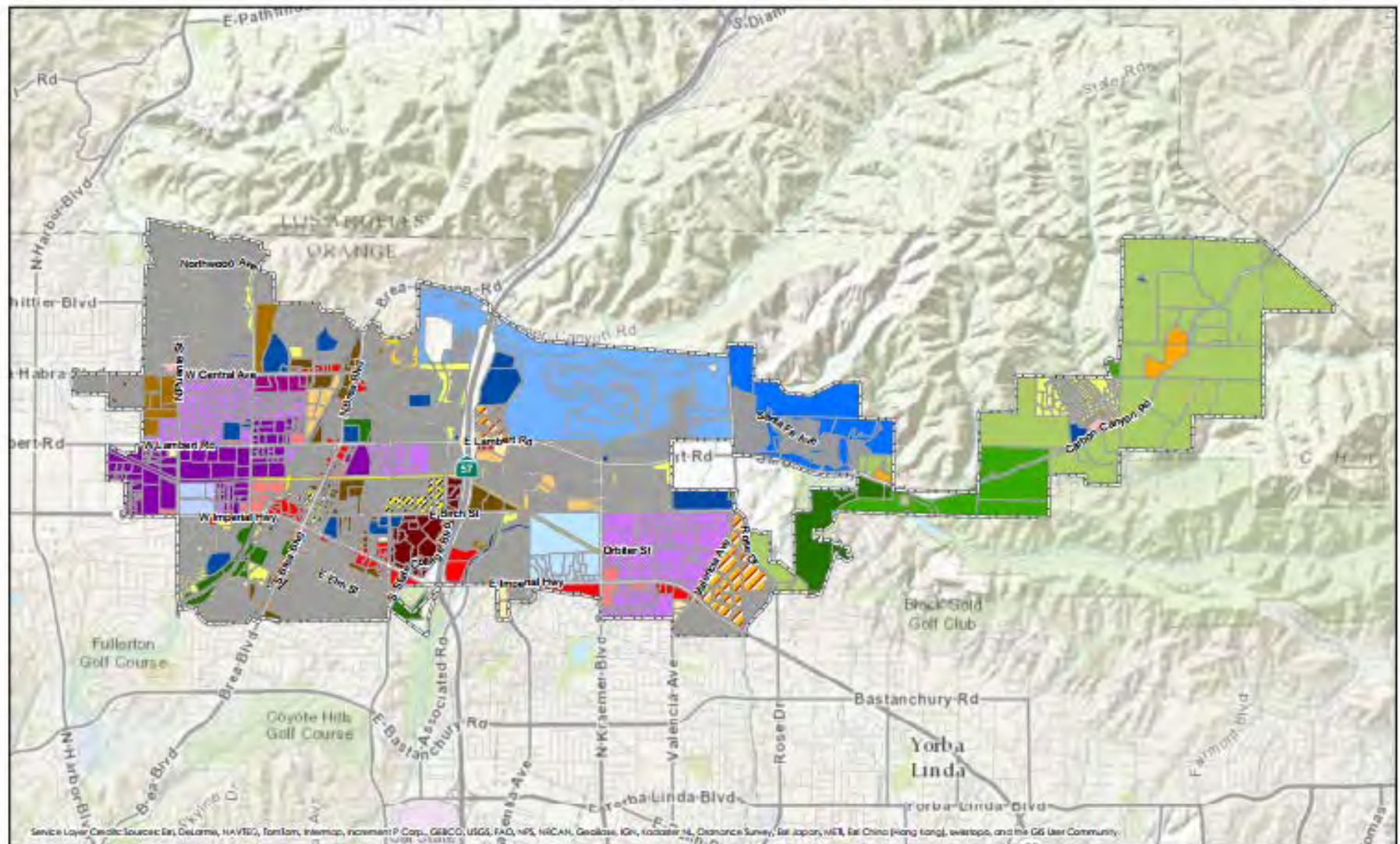
General Plan Land Use in City of Brea



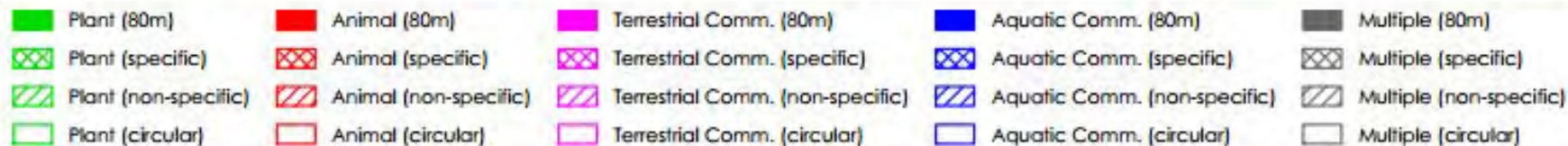
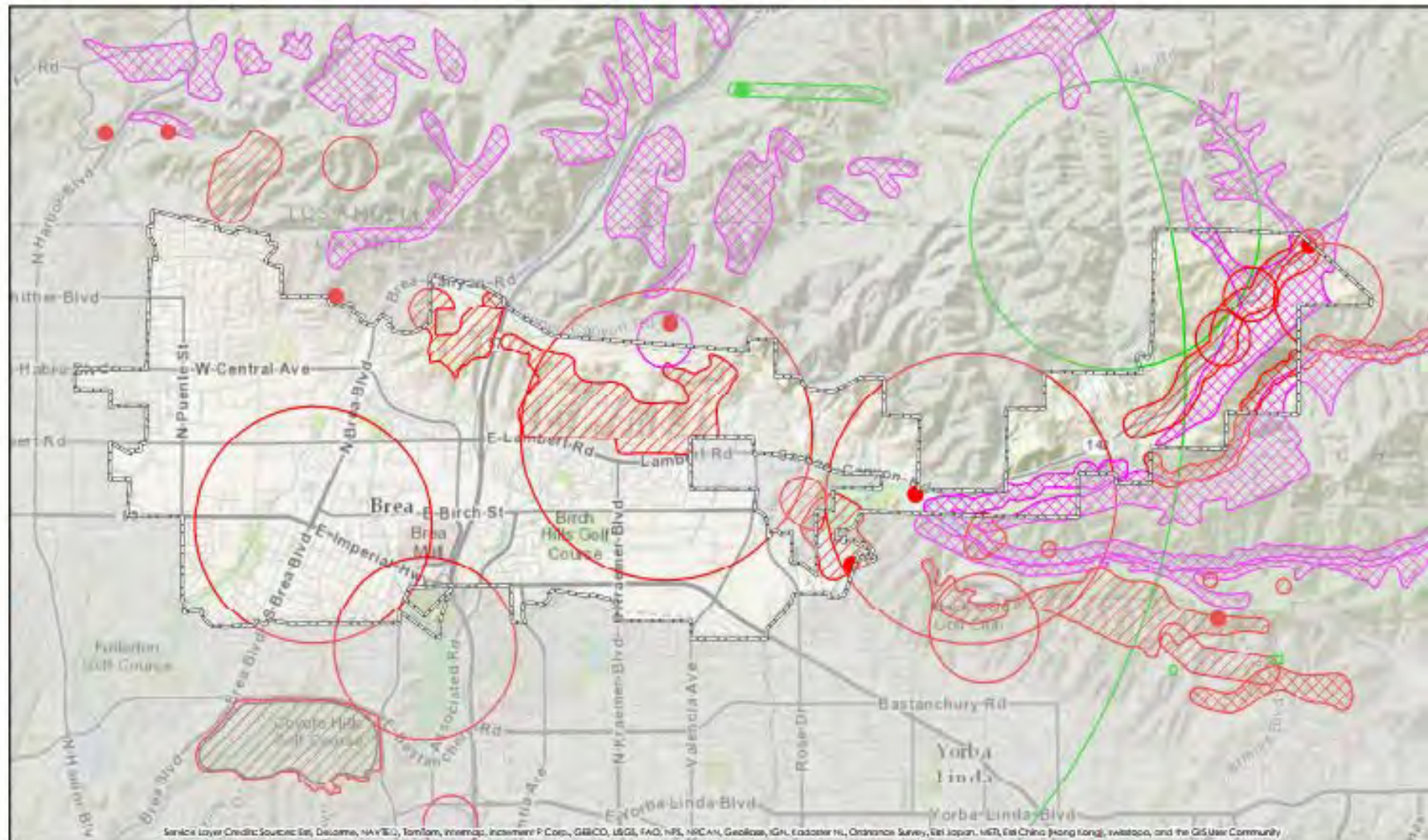
2012 SCAG General Plan Land Use Codes

Single Family Residential	Commercial and Services	Transportation, Communications, and Utilities	Vacant
Multi-Family Residential	Facilities	Mixed Commercial and Industrial	Water
Mobile Homes and Trailer Parks	Education	Mixed Residential and Commercial	Specific Plan
Mixed Residential	Military Installations	Open Space and Recreation	Undevelopable or Protected Land
General Office	Industrial	Agriculture	Unknown

Zoning in City of Brea

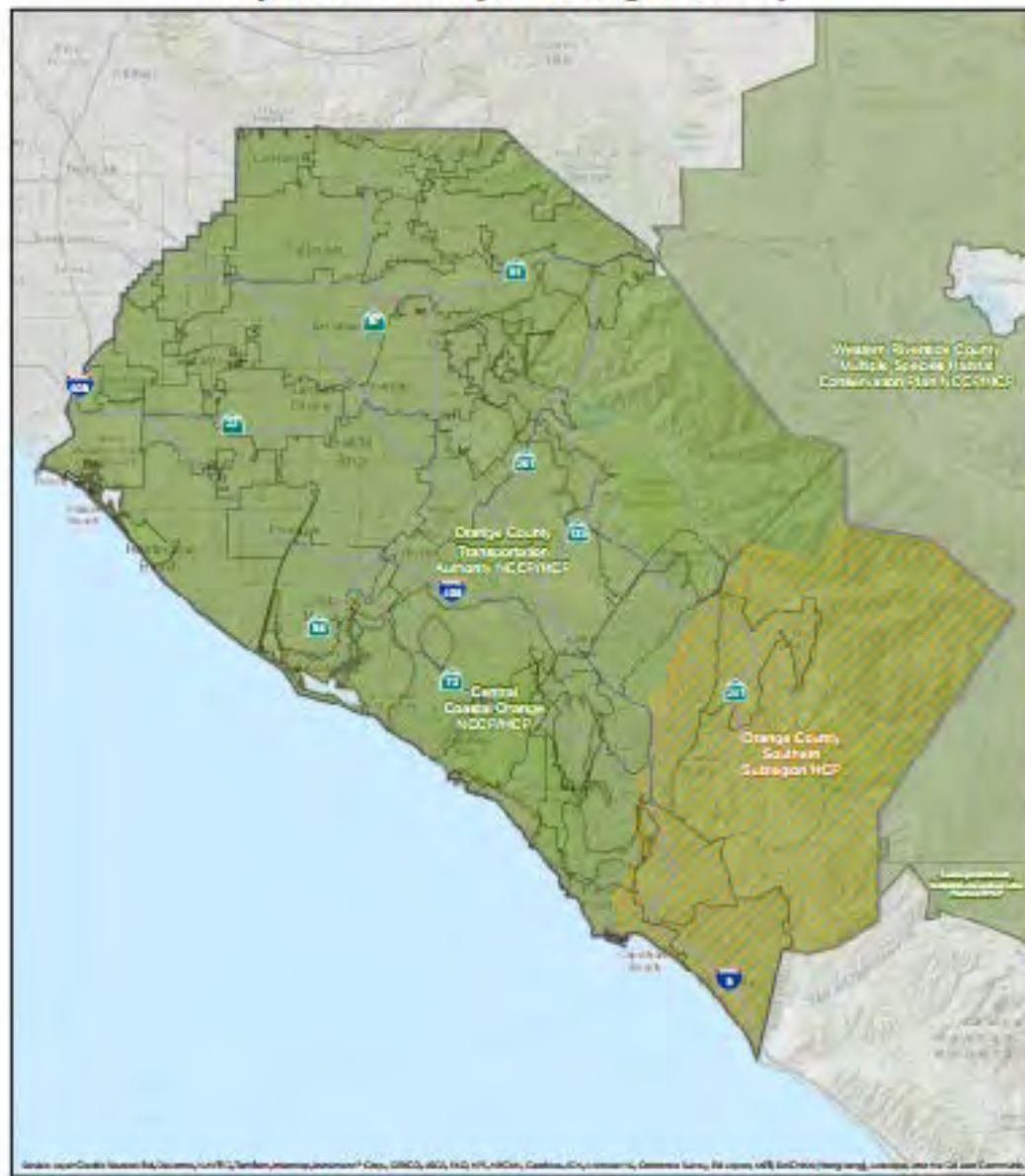


Known Sightings of Endangered, Threatened, and Rare Plant and Animal Species in City of Brea



500-year Flood Hazard Zone

Natural Community & Habitat Conservation Plans (NCCP & HCP) in Orange County



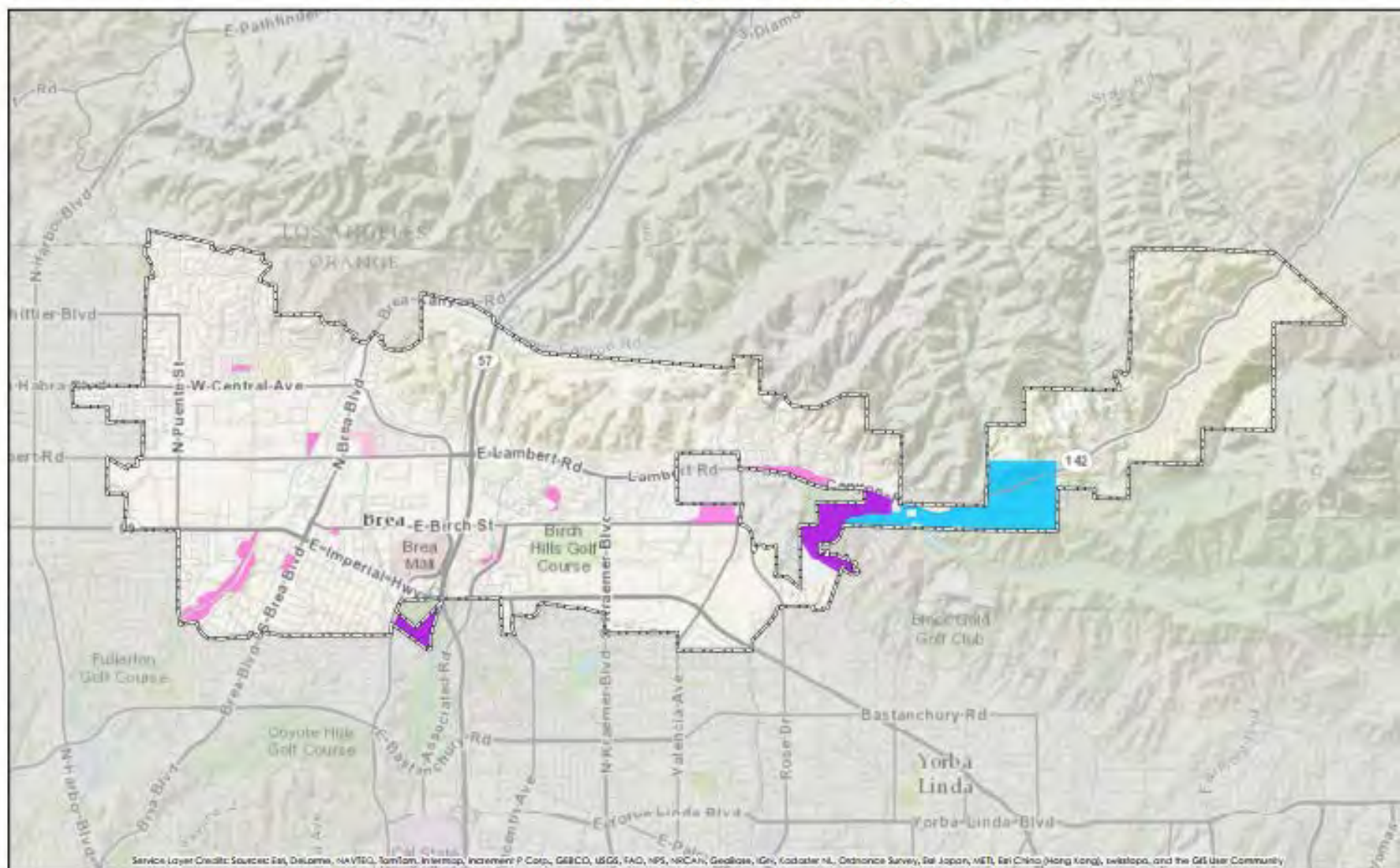
County Boundary

City Boundary

NCCP / HCP

HCP

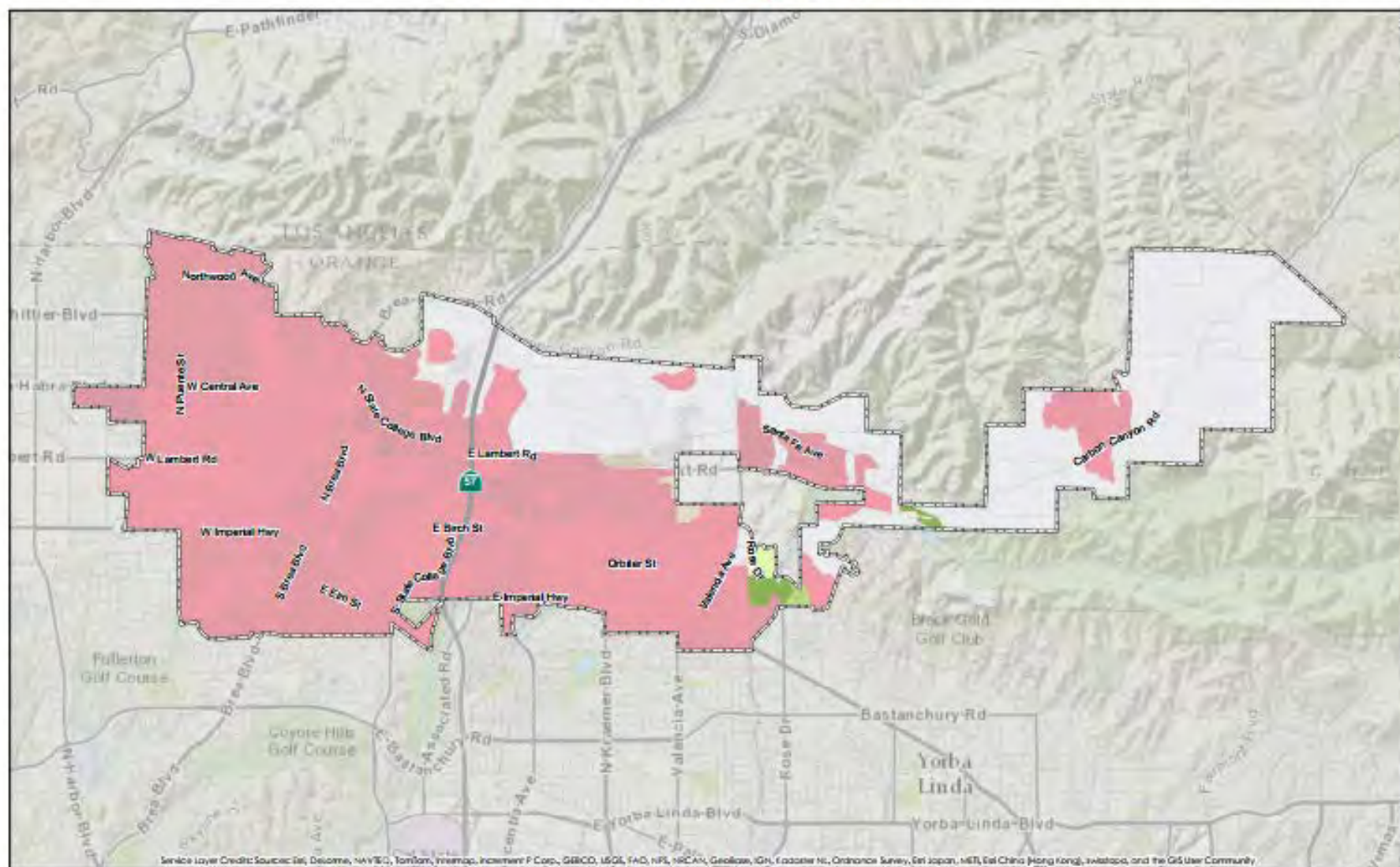
Protected Open Space in City of Brea



By Ownership

- | | | | |
|---|---|---|---|
|  US Forest Service |  Other Federal |  County |  US Military/Defense |
|  US Bureau of Land Management |  California Department of Parks and Recreation |  City | |
|  National Park Service |  California Department of Fish and Wildlife |  Non Governmental Organization | |
|  US Fish and Wildlife Service |  Other State |  Special District | |

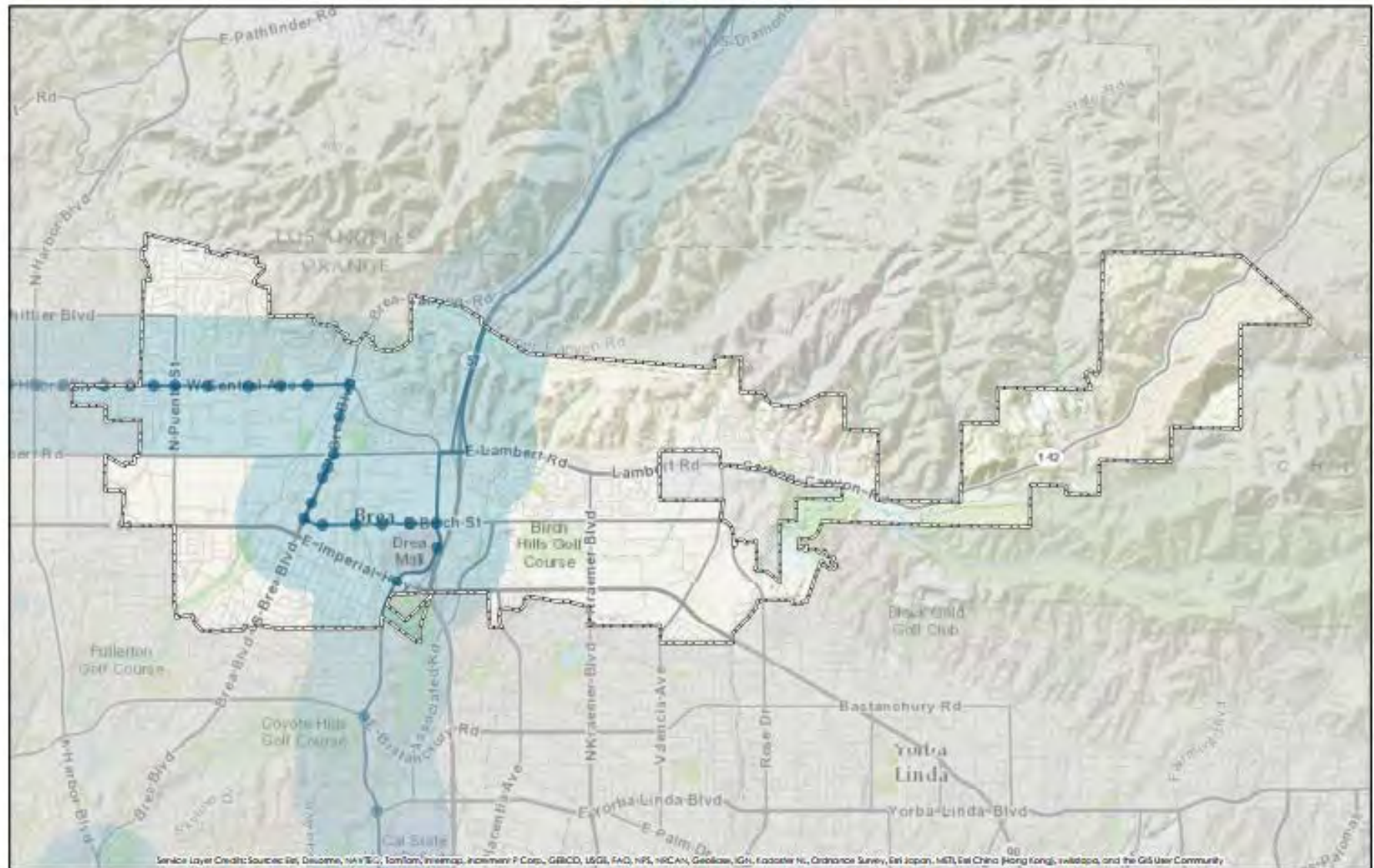
Farmland in City of Brea



Service Layer Credits: Source: Esri, DeLorme, NAVTEQ, TomTom, Intermap, Incorpore P Corp., GEBCO, USGS, FAO, NPS, NRCAN, Geoscience, IGN, Esri, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), Swisstopo, and the GIS User Community

- | | | | |
|----------------------------------|------------------------------|---|-------------------------|
| Prime Farmland | Farmland of Local Importance | Nonagricultural or Natural Vegetation | Urban and Built-Up Land |
| Farmland of Statewide Importance | Farmland of Local Potential | Vacant or Disturbed Land | Water Area |
| Unique Farmland | Other Land | Rural Residential Land | Irrigated Farmland |
| Grazing Land | Confined Animal Agriculture | Semi-agricultural and Rural Commercial Land | Nonirigated Farmland |
| | | | Out of Survey Area |

Major Transit Stops & High-Quality Transit Corridor (HQTC) in City of Brea



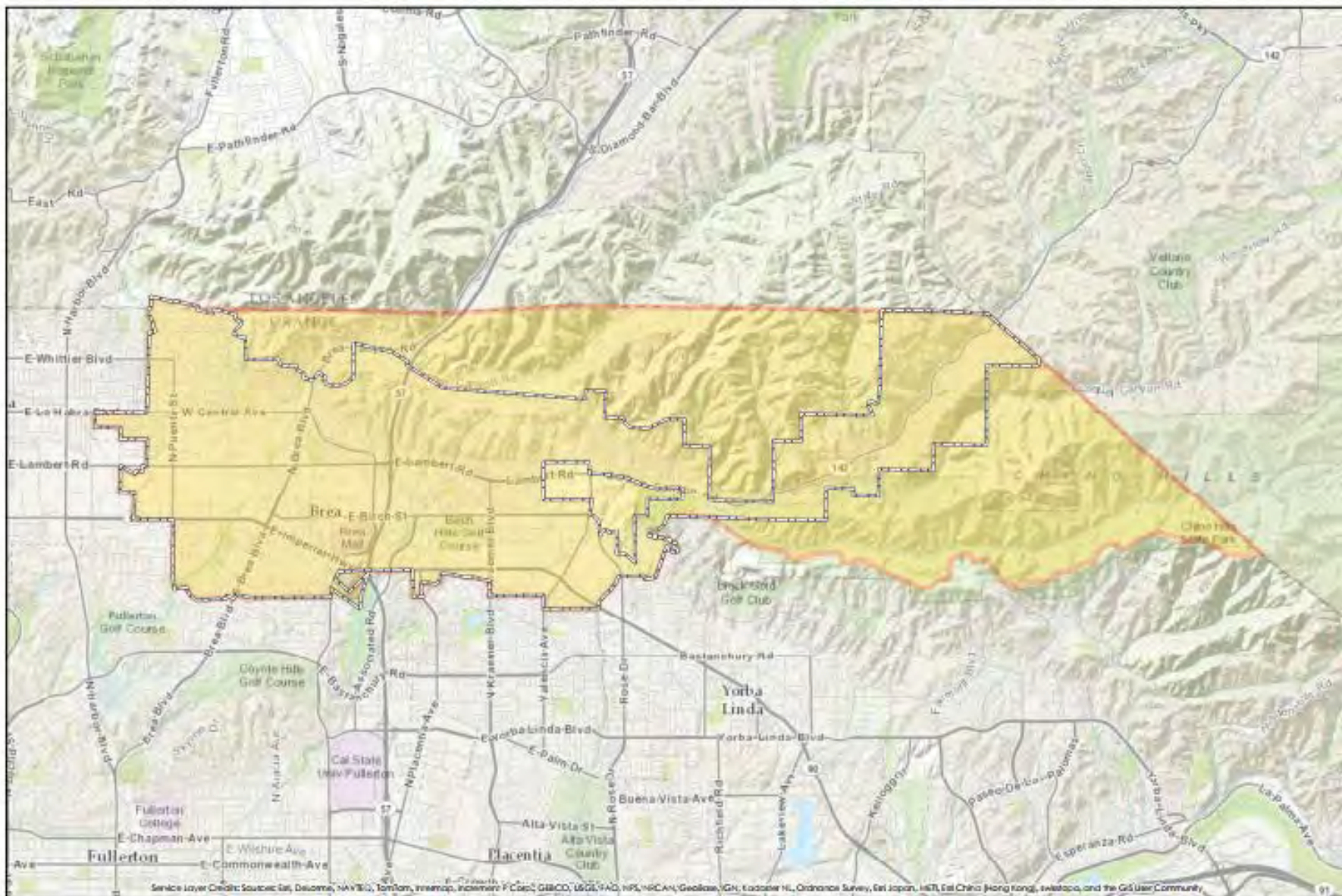
City Boundary

Major Transit Stops

HQTC

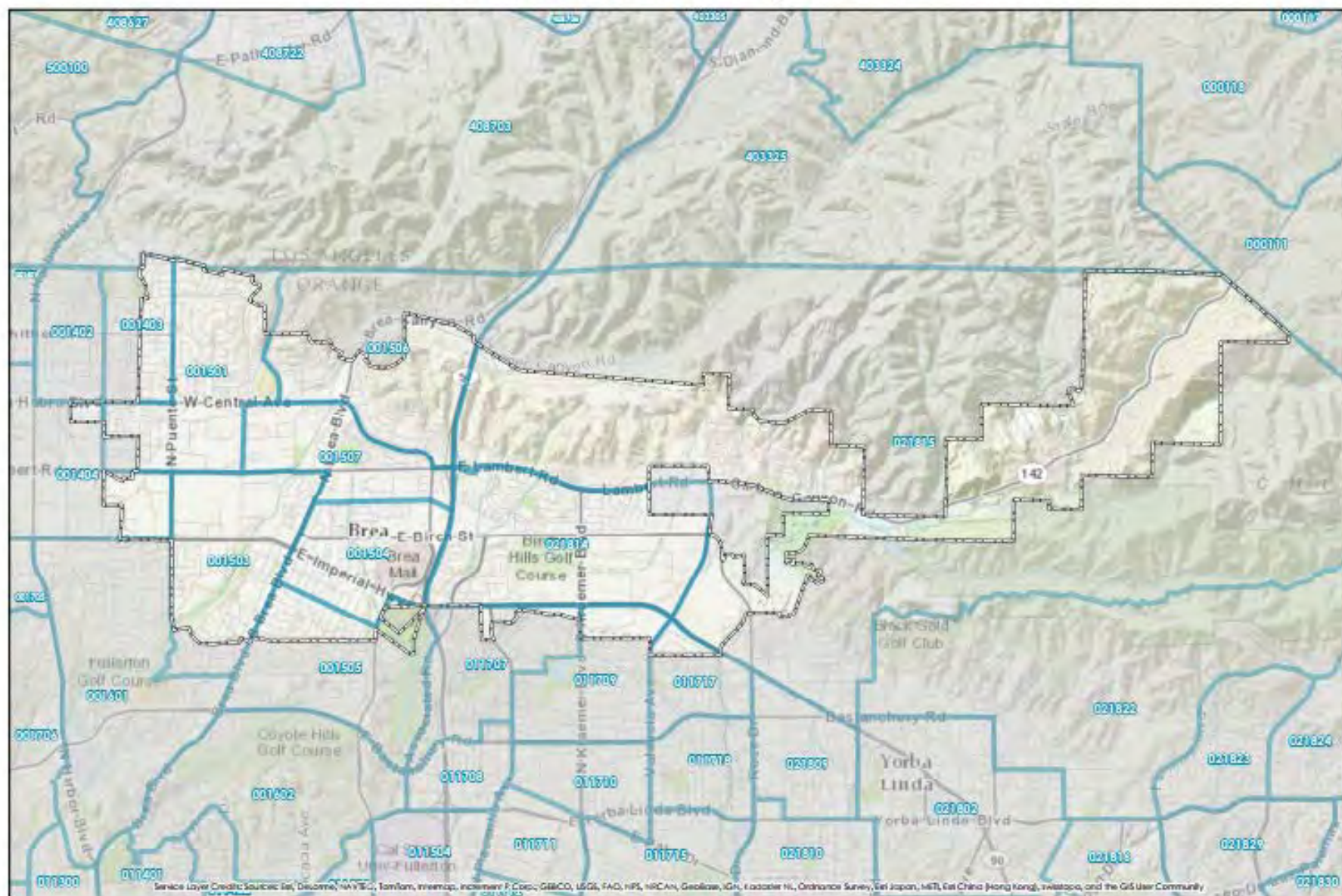
0.5 mile Buffer from Major Transit Stops & HQTC

Sphere of Influence for City of Brea

 City Boundary

 Sphere of Influence

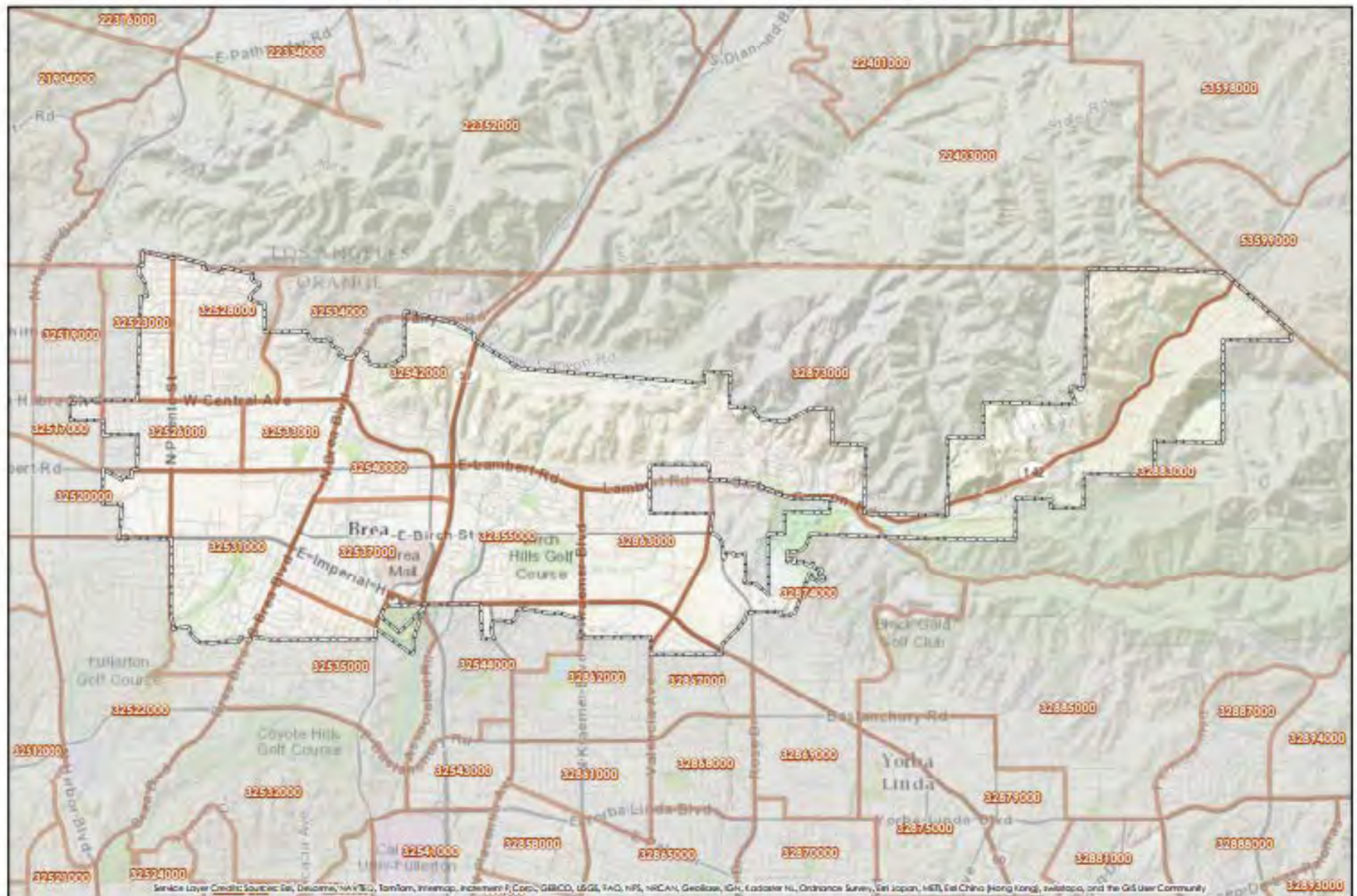
Census Tracts in City of Brea



City Boundary

2010 Census Tracts

Transportation Analysis Zones in City of Brea



City Boundary

Transportation Analysis Zones (TAZ)

THANK YOU
for questions, please contact

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213-236-1844



SCAG Map Book



for 2016-2040 Regional Transportation Plan/
Sustainable Communities Strategy (RTP/SCS) Development

City of Anaheim



**SOUTHERN CALIFORNIA
ASSOCIATION of GOVERNMENTS**

8 / 1 / 2013

Contents

Introduction	1
Land Use	2
General Plan Land Use & Zoning	2
Existing Land Use (2012)	2
Resource Areas & Farmland	9
Endangered species and plants.....	10
Flood Areas	11
Natural Community & Habitat Conservation Plan	11
Open Space and Park	12
Farmland.....	13
Transit Priority Project.....	15
Major Stops & High Quality Transit Corridors	15
Geographical boundaries	17
City boundary & Sphere of Influence	17
Census tract boundary	17
TAZ boundary	17
Maps	22
General Plan Land Use (Based on City Codes)	
General Plan Land Use (Based on 2012 SCAG General Plan Land Use Codes)	
Zoning	
Existing Land Use (Based on 2012 SCAG Existing Land Use Codes)	
Endangered, Threatened, and Rare Plant and Animal Species	
Federally Designated Flood Hazard Zones	
Natural Community & Habitat Conservation Plans	
Protected Open Space	
Farmland	
Major Stops & High Quality Transit Corridors	
Sphere of Influence	
Census Tract boundary	
Transportation Analysis Zone (TAZ) boundary	
Acknowledgments	

Introduction

SB 375 (Steinberg), also known as California's Sustainable Communities Strategy and Climate Protection Act, is a state law that calls for the integration of transportation, land use, and housing planning and the reduction of greenhouse gas (GHG) emissions as one of the main goals for regional planning. Effective on January 1, 2009, the law requires SCAG as the Metropolitan Planning Organization, working together with subregional council of governments and the county transportation commission, to prepare a Sustainable Communities Strategy (SCS) as part of the Regional Transportation Plan (RTP) (or an Alternative Planning Strategy (APS), if necessary). Also, SCAG is required to integrate planning processes to be consistent with the SCS. SB 375 also emphasizes a substantial public participation process involving all stakeholders.

To meet the requirements under SB 375, SCAG prepares and provides a set of GIS maps to subregions and local jurisdictions for their review. These GIS maps are identified in SB 375 as required to be considered in SCS development. It should be noted that all maps provided here are to initiate dialogue among stakeholders to address the requirements of SB 375 and its implementation. These maps are used to collect input and comments from subregions and local jurisdictions. Maps and datasets will be further reviewed and updated through local input process.

The list of GIS maps included in this book:

<u>Land Use</u>	<u>Transit Priority Projects</u>
General Plan	Major Stops & High Quality Transit Corridors
Zoning	
Existing Land Use	<u>Geographical boundaries</u>
	City Boundary & Sphere of Influence
<u>Resource Areas & Farmland</u>	Census Tract Boundary
Endangered Species and Plants	Transportation Analysis Zone (TAZ) Boundary
Flood areas	
Natural Community & Habitat Conservation	
Open Space and Parks	
Farmland	

The SCAG Map Book is designed to help local planners and those who are interested in SCAG's datasets better understand the sources, methodologies, and contents of each dataset. This document is prepared for each jurisdiction in the SCAG region.

This book begins with the brief descriptions of the datasets. This is followed by the GIS maps for each jurisdiction. Upon request, the maps can be provided in larger sizes for detailed review. SCAG may not be authorized to release certain datasets depending on the access/release constraints variously applied to each dataset.

For more information or to request data and/or maps, please contact Jung Seo at (213) 236-1861, or seo@scag.ca.gov.

Land Use

SCAG staff prepared four sets of land use maps at parcel level as follows:

- General plan land use based on city's/county's general plan codes
- General plan land use based on 2012 SCAG General Plan Land Use Codes
- Zoning
- Existing land use (2012)

The current version of the land use data reflect the local inputs received by June 30, 2013. It should be noted that the datasets will be further reviewed and updated through the local input process.

General Plan Land Use & Zoning

Beginning in March 2013, SCAG communicated with the local jurisdictions to collect the general plan and zoning information. Through the process of collecting general plan and zoning documents, SCAG staff made every effort to ensure the data reflects most current general plan and zoning adopted. The information included in this document reflects the local inputs received by June 30, 2013. SCAG continues to receive local input, and will incorporate them in the next phase.

The general plan and zoning documents, maps, and/or GIS shapefiles collected were coded into GIS shapefiles at parcel level. Parcel boundary data were acquired from Digital Map Product (DMP). General plan and zoning data are shown at a parcel level and in many areas accurately depict a local agency's adopted documents. However, the data shown in some areas may be generalized, because the parcel level database representing general plan does not support multiple uses or designations on a single parcel (either splitting the parcel or representing overlays). Due to this limitation, if site specific data is necessary, users should always reference a local agency's adopted documents or field surveys to determine actual land use designations.

At the jurisdiction level, both general plan land use and zoning maps are prepared with the consistent land use or zoning codes with those used in each local jurisdiction. In addition, another version of general plan land use map is prepared with SCAG's standardized General Plan codes. For detailed information on the standardized codes, please refer to Table 1: 2012 SCAG General Plan Land Use Codes Table.













Existing Land Use (2012)




The base year of the 2016-2040 RTP/SCS is 2012. To develop the base year existing land use data, SCAG has used property land use information acquired from DMP and SCAG's 2008 existing land use data. Using a correspondence between DMP land use codes and 2012 SCAG Existing Land Use Codes, DMP land use codes were converted to SCAG's standardized Existing Land Use

code system. Anderson Land Use Classification was used as the standardized land use code system. For more detailed information on the land use code system, refer to Table 2: 2012 SCAG Existing Land Use Codes Table. It should be noted that the datasets will be further reviewed and updated through the local input process.











As noted in General Plan and Zoning, Existing Land Use data are shown at a parcel level and in many areas accurately depict the existing land use, but in some areas is generalized. Because the parcel level database representing existing land use does not support multiple uses or designations on a single parcel, the data shown may generalize the data and thus not accurately depict a local government's existing land use on the site. Due to this limitation, if site specific data is necessary, users should always reference a local agency's adopted documents or field surveys to determine actual land use designations.









**Table 1:
2012 SCAG General Plan Land Use Codes - Legend**



Legend	Land Use Description
 Single Family Residential	1110 Single Family Residential
 Multi-Family Residential	1120 Multi-Family Residential
 Mobile Homes and Trailer Parks	1130 Mobile Homes and Trailer Parks
 Mixed Residential	1140 Mixed Residential 1100 Residential
 General Office	1210 General Office Use
 Commercial and Services	1200 General Commercial 1220 Retail and Commercial and Services 1221 Regional Shopping Center 1230 Other Commercial 1233 Hotels and Motels
 Facilities	1240 Public Facilities 1250 Special Use Facilities
 Education	1260 Education – K-12 1265 Education – College
 Military Installations	1270 Military Installations
 Industrial	1300 General Industrial 1310 Light Industrial 1311 Light Manufacturing, Assembly, and Industrial Services 1320 Heavy Industrial 1321 Heavy Manufacturing 1340 Wholesaling and Warehousing
 Transportation, Communications, and Utilities	1410 Transportation 1420 Communication Facilities 1430 Utility Facilities
 Mixed Commercial and Industrial	1500 Mixed Commercial and Industrial
 Mixed Residential and Commercial	1600 Mixed Residential and Commercial
 Open Space and Recreation	1810 Golf Courses 1820 Local Parks and Recreation 1830 State and National Parks and Recreation 1840 Cemeteries 1850 Wildlife Preserves and Sanctuaries 1860 Specimen Gardens and Arboreta 1870 Beach Parks 1880 Other Open Space and Recreation
 Vacant	1900 Urban Vacant 3000 Vacant
 Agriculture	2000 Agriculture
 Water	4000 Water

 Specific Plan	7777 Specific Plan
 Undevelopable or Protected Land	8888 Undevelopable or Protected Land
 Unknown	9999 Unknown

**Table 2:
2012 SCAG Existing Land Use Codes - Legend**

Legend	Land Use Description
 Single Family Residential	1110 Single Family Residential 1111 High-Density Single Family Residential 1112 Low-Density Single Family Residential 1113 Rural Residential
 Multi-Family Residential	1120 Multi-Family Residential 1121 Mixed Multi-Family Residential 1122 Duplexes, Triplexes and 2- or 3-Unit Condominiums and Townhouses 1123 Low-Rise Apartments, Condominiums, and Townhouses 1124 Medium-Rise Apartments and Condominiums 1125 High-Rise Apartments and Condominiums
 Mobile Homes and Trailer Parks	1130 Mobile Homes and Trailer Parks 1131 Trailer Parks and Mobile Home Courts, High-Density 1132 Mobile Home Courts and Subdivisions, Low-Density
 Mixed Residential	1140 Mixed Residential 1100 Residential
 General Office	1210 General Office Use 1211 Low- and Medium-Rise Major Office Use 1212 High-Rise Major Office Use 1213 Skyscrapers
 Commercial and Services	1200 Commercial and Services 1220 Retail Stores and Commercial Services 1221 Regional Shopping Center 1222 Retail Centers (Non-Strip With Contiguous Interconnected Off-Street Parking) 1223 Retail Strip Development 1230 Other Commercial 1231 Commercial Storage 1232 Commercial Recreation 1233 Hotels and Motels
 Facilities	1240 Public Facilities 1241 Government Offices 1242 Police and Sheriff Stations 1243 Fire Stations 1244 Major Medical Health Care Facilities 1245 Religious Facilities 1246 Other Public Facilities 1247 Public Parking Facilities 1250 Special Use Facilities 1251 Correctional Facilities 1252 Special Care Facilities 1253 Other Special Use Facilities
 Education	1260 Educational Institutions 1261 Pre-Schools/Day Care Centers 1262 Elementary Schools 1263 Junior or Intermediate High Schools 1264 Senior High Schools 1265 Colleges and Universities 1266 Trade Schools and Professional Training Facilities
 Military Installations	1270 Military Installations 1271 Base (Built-up Area) 1272 Vacant Area 1273 Air Field 1274 Former Base (Built-up Area) 1275 Former Base Vacant Area 1276 Former Base Air Field
 Industrial	1300 Industrial 1310 Light Industrial 1311 Manufacturing, Assembly, and Industrial Services 1312 Motion Picture and Television Studio Lots 1313 Packing Houses and Grain Elevators 1314 Research and Development 1320 Heavy Industrial 1321 Manufacturing 1322 Petroleum Refining and Processing

	1323 Open Storage 1324 Major Metal Processing 1325 Chemical Processing 1330 Extraction 1331 Mineral Extraction - Other Than Oil and Gas 1332 Mineral Extraction - Oil and Gas 1340 Wholesaling and Warehousing
 Transportation, Communications, and Utilities	1400 Transportation, Communications, and Utilities 1410 Transportation 1411 Airports 1412 Railroads 1413 Freeways and Major Roads 1414 Park-and-Ride Lots 1415 Bus Terminals and Yards 1416 Truck Terminals 1417 Harbor Facilities 1418 Navigation Aids 1420 Communication Facilities 1430 Utility Facilities 1431 Electrical Power Facilities 1432 Solid Waste Disposal Facilities 1433 Liquid Waste Disposal Facilities 1434 Water Storage Facilities 1435 Natural Gas and Petroleum Facilities 1436 Water Transfer Facilities 1437 Improved Flood Waterways and Structures 1438 Mixed Utilities 1440 Maintenance Yards 1441 Bus Yards 1442 Rail Yards 1450 Mixed Transportation 1460 Mixed Transportation and Utility
 Mixed Commercial and Industrial	1500 Mixed Commercial and Industrial
 Mixed Residential and Commercial	1600 Mixed Residential and Commercial
 Open Space and Recreation	1800 Open Space and Recreation 1810 Golf Courses 1820 Local Parks and Recreation 1830 Regional Parks and Recreation 1840 Cemeteries 1850 Wildlife Preserves and Sanctuaries 1860 Specimen Gardens and Arboreta 1870 Beach Parks 1880 Other Open Space and Recreation
 Agriculture	2000 Agriculture 2100 Cropland and Improved Pasture Land 2110 Irrigated Cropland and Improved Pasture Land 2120 Non-Irrigated Cropland and Improved Pasture Land 2200 Orchards and Vineyards 2300 Nurseries 2400 Dairy, Intensive Livestock, and Associated Facilities 2500 Poultry Operations 2600 Other Agriculture 2700 Horse Ranches
 Vacant	3000 Vacant 3100 Vacant Undifferentiated 3200 Abandoned Orchards and Vineyards 3300 Vacant With Limited Improvements 3400 Beaches (Vacant) 1900 Urban Vacant
 Water	4000 Water 4100 Water, Undifferentiated 4200 Harbor Water Facilities 4300 Marina Water Facilities 4400 Water Within a Military Installation 4500 Area of Inundation (High Water)
 Under Construction	1700 Under Construction

 Undevelopable or Protected Land	8888 Undevelopable or Protected Land
 Unknown	9999 Unknown

Resource Areas & Farmland

SB 375 identifies as one of the guidelines on developing SCS to “gather and consider the best practically available scientific information regarding resource areas and farmland in the region as defined in subdivision (a) and (b) of Section 65080.01.” The definitions of Resource areas and Farmland specified in Section 65080.01 are as following:

- (a) *“Resource areas” include*
 - (1) *all publicly owned parks and open space;*
 - (2) *open space or habitat areas protected by natural community conservation plans, habitat conservation plans, and other adopted natural resource protection plans;*
 - (3) *habitat for species identified as candidate, fully protected, sensitive, or species of special status by local, state, or federal agencies or protected by the federal Endangered Species Act of 1973, the California Endangered Species Act, or the Native Plant Protection Act;*
 - (4) *lands subject to conservation or agricultural easements for conservation or agricultural purposes by local governments, special districts, or nonprofit 501(c)(3) organizations, areas of the state designated by the State Mining and Geology Board as areas of statewide or regional significance pursuant to Section 2790 of the Public Resources Code, and lands under Williamson Act contracts;*
 - (5) *areas designated for open-space or agricultural uses in adopted open-space elements or agricultural elements of the local general plan or by local ordinance;*
 - (6) *areas containing biological resources as described in Appendix G of the CEQA Guidelines that may be significantly affected by the sustainable communities strategy or the alternative planning strategy; and*
 - (7) *an area subject to flooding where a development project would not, at the time of development in the judgment of the agency, meet the requirements of the National Flood Insurance Program or where the area is subject to more protective provisions of state law or local ordinance.*
- (b) *“Farmland” means farmland that is outside all existing city spheres of influence or city limits as of January 1, 2008, and is one of the following:*
 - (1) *Classified as prime or unique farmland or farmland of statewide importance.*
 - (2) *Farmland classified by a local agency in its general plan that meets or exceeds the standards for prime or unique farmland or farmland of statewide importance.*

To comply with the guidelines, SCAG prepared the relevant datasets of Endangered species and plants, Flood areas, Natural habitat, Open space and park, and Farmland from various sources.

Endangered species and plants

SCAG obtained the California Natural Diversity Database (CNDDDB)¹ July 2013 version developed by the California Department of Fish and Wildlife's Biogeographic Data Branch (BDB). The CNDDDB is a library of the location and condition of species of rare and sensitive plants, animals, and natural communities in California. It is updated on a continuous basis to be consistent and current, but cannot be an exhaustive and comprehensive inventory of rare species and natural communities. Field verification for the absence and presence of sensitive species is required by the end users. For more information on the CNDDDB, please refer to their website (<http://www.dfg.ca.gov/biogeodata/cnddb/>) The CNDDDB is offered on a yearly subscription basis, and prohibits to be distributed to anyone outside the subscribing organizations. The data can be ordered online at <http://www.dfg.ca.gov/biogeodata/cnddb/mapsanddata.asp>. Also, the web-based CNDDDB Quick Viewer which shows information only to the 7.5' quadrangle or county level is available at http://imaps.dfg.ca.gov/viewers/cnddb_quickviewer/app.asp.

The dataset is shown on the map is based on the combination of the three data fields; element type, accuracy and element occurrence count. Other fields in CNDDDB describe the listing status, ranking, location, site description and source references, to name a few.

The types of elements (ELMTYPE) are specified as four categories of plant, animal, terrestrial community, and aquatic community.

Value	Definition
1	Plant (ELMCODEs beginning with "P" or "N")
2	Animal (ELMCODEs beginning with "A" or "I")
3	Terrestrial community (ELMCODEs beginning with "CT")
4	Aquatic community (ELMCODEs beginning with "CA", "CE", "CL", "CM" or "CR")

The precision or accuracy level (ACC_CLASS) represents spatial uncertainty on a scale of one to ten, indicating both accuracy type and accuracy value.

Value	Definition
80 meters	1: Specific bounded area with an 80 meter radius
Specific	2: Specific bounded area
Nonspecific	3: Non-specific bounded area
1/10 mile	4: Circular feature with a 150 meter radius (1/10 mile)
1/5 mile	5: Circular feature with a 300 meter radius (1/5 mile)
2/5 mile	6: Circular feature with a 600 meter radius (2/5 mile)
3/5 mile	7: Circular feature with a 1000 meter radius (3/5 mile)
4/5 mile	8: Circular feature with a 1,300 meter radius (4/5 mile)
1 mile	9: Circular feature with a 1,600 meter radius (1 mile)
5 miles	10: Circular feature with a 8,000 meter radius (5 miles)

¹ The CNDDDB is a "natural heritage program" and is part of a nationwide network of similar programs overseen by NatureServe (formerly part of The Nature Conservancy). All natural heritage programs provide location and natural history information on special status plants, animals, and natural communities to the public, other agencies, and conservation organizations. The data help drive conservation decisions, aid in the environmental review of projects and land use changes, and provide baseline data helpful in recovering endangered species and for research projects.

The element occurrence count (EOCOUNT) represents how many occurrences share the same spatial feature. An EOCOUNT greater than one indicates the presence of a “multiple.”

Flood Areas

The flood area maps are based on the Q3 Flood Data, obtained from Federal Emergency Management Agency (FEMA) in June, 2013. The Q3 Flood Data is a digital representation of certain features of Flood Insurance Rate Maps (FIRM)². The FIRM is created by FEMA for the purpose of floodplain management, mitigation, and insurance activities for the National Flood Insurance Program (NFIP). The Q3 Flood Data are developed by scanning the existing FIRM hardcopy, vectorizing a thematic overlay of flood risks. Q3 vector data are contained in one single countywide file, including all incorporated and unincorporated areas of a county.

FEMA prepares the flood maps to show the extent of flood hazard in a flood prone community by conducting engineering studies called “Flood Insurance Studies (FISs). From the study, FEMA delineate Special Flood Hazard Areas (SFHAs), which are subject to inundation by a flood that has a 1 percent or greater chance of being equaled or exceeded during any given year. This type of flood is commonly referred to as ‘the 100-year flood’ or base flood. The 100-year flood has a 26 percent chance of occurring during a 30 year period, the length of many mortgages. The 100-year flood is a regulatory standard used by Federal and most State agencies to administer floodplain management programs.

The FIRM includes data on the 100-year (1% annual chance of occurring) and 500-year (0.2% annual chance of occurring) floodplains. For more information on the FIRM, refer to their website at <http://www.fema.gov/hazard/map/firm.shtm>

The flood maps developed by FEMA are primary tools for state and local governments to mitigate the effects of flooding in their communities. The data are available to the public at FEMA's Map Service Center (<http://www.msc.fema.gov>). You may also request the related documents or other maps, such as FIS result report, or a Flood Boundary and Floodway Map (FBFM.)

The map included in this document is prepared at county level for better presentation of the flood areas, which is normally not constrained to city limits.

Natural Community & Habitat Conservation Plan

The data on natural community and habitat conservation plan are from the Natural Community Conservation Planning (NCCP) program of California Department of Fish and Wildlife. With partnerships with public and private organizations, NCCP is an effort for the protection and perpetuation of biological diversity, while allowing compatible and appropriate economic

² The FIRM is the official map of a community on which FEMA has delineated both the special hazard areas and the risk premium zones applicable to the community. Since 1970s, the FEMA has created and updated the flood hazard maps for National Flood Insurance Program (NFIP). NFIP was created by the US Congress in 1968 to reduce future damage and to provide protection for property owners from potential loss through an insurance mechanism.

activity. The NCCP program started in 1991 under the State's Natural Community Conservation Planning Act, which has broader orientation and objectives than the previous laws limited to the protection of species already declined in number significantly.

The primary objective is to conserve natural communities at the ecosystem level, while accommodating compatible land use. By considering the long-term stability of wildlife and plant communities, and including key interests in the planning process, it aims at anticipating and preventing the controversies in the surrounding areas of the species.

A local agency is in charge of monitoring the development of a conservation plan in cooperation with landowners, environmental organizations and other interest parties. The Department of Fish and Wildlife provides necessary support, direction, and guidance to NCCP participants.³ For more information on the NCCP phases and guidance, refer to their website at <http://www.dfg.ca.gov/habcon/nccp>.

Open Space and Park

For the 2016-2040 RTP/SCS, and SCS development, "all publicly owned" open spaces need to be considered as guided in SB 375. The data on the publicly owned open space and park come from the California Protected Areas Database (CPAD), a GIS inventory of all publicly owned protected open space lands in the State of California through fee ownership. GreenInfo Network has prepared CPAD by aggregating and cross-checking various open space data from state, local and other agencies.

For clear understanding of the database, it is important to understand two basic definitions of the database. First, the "protected" status in CPAD does not refer to a specific level of conservation for biodiversity values, but a general commitment to maintain the property for open space uses. Second, by fee ownership mechanism, it means that 1) the lands in CPAD are defined based on the agencies that owns the fee title to the property, not the managing parties, and 2) CPAD is not the database of all public lands, but that of all "publicly owned" open space. The owning agencies include public and non-profits, but currently the private owners and properties under the use of easements are excluded. Open space lands maintained other than ownership mechanisms (easement or related less-than-fee mechanisms) are provided in a separate database developed by GreenInfo Network. For more details on the inclusion criteria, see the CPAD manual from their website at http://www.calands.org/download/CPAD_Manual_June2010.pdf

The database is prepared into three feature classes; Holdings, Units, and Super Units. Holdings are the parcel level open space information, which correspond to assessor or tax parcel boundaries. Units and Super Units are the aggregated features for the cartographic representation. (Units: the aggregation of Holdings into specific parks and reserves/ Super Units: the aggregation of federal and state Holdings regardless county boundaries) All classes of data

³ Department of Fish and Game sponsors two grant programs for NCCP/HCPs; Local Assistance Grants (LAG) with the state funds for urgent tasks associated with implementing approved NCCPs or NCCPs anticipated to be approved within 12 months of grant application, and ESA SECTION 6 GRANTS program through the federal grant from the U.S. Fish and Wildlife Service (FWS).

are downloadable through their website at <http://www.calands.org/uses>. For user constraints, refer to the License Agreement. GreenInfo Network has released several versions of the CPAD since March, 2008. The most updated available is version 1.9 released in March, 2013. For more information on CPAD update histories and changes, see their website at <http://www.calands.org/data>

The map included in this document is presented by ownership. The lands in CPAD range from huge national forests to very small urban parks. Federal, state, county, city, special district and non-governmental agency holdings are included and have been mapped at the high levels of accuracy.

Farmland

Farmland information was obtained from the Farmland Mapping & Monitoring Program (FMMP) in the Division of Land Resource Protection in the California Department of Conservation. Established in 1982, the FMMP is to provide consistent and impartial data and analysis of agricultural land use and land use changes throughout the State of California.⁴

SCAG obtains the Important Farmland Map created by FMMP. The study area is in accordance to the soil survey developed by NRCS (National Resources Conservation Service) in the United States Department of Agriculture. Important Farmland Map is biennially updated based on a computer mapping system, aerial imagery, public review, and field interpretation.

The minimum land use mapping unit is 10 acres. The classification system of the map was developed by combining technical soil rating and current land use. For more information, refer to the website at <http://www.consrv.ca.gov/dlrp/fmmp/overview/Pages/index.aspx>.

PRIME FARMLAND (P)	Farmland with the best combination of physical and chemical features able to sustain long term agricultural production. This land has the soil quality, growing season, and moisture supply needed to produce sustained high yields. Land must have been used for irrigated agricultural production at some time during the four years prior to the mapping date.
FARMLAND OF STATEWIDE IMPORTANCE (S)	Farmland similar to Prime Farmland but with minor shortcomings, such as greater slopes or less ability to store soil moisture. Land must have been used for irrigated agricultural production at some time during the four years prior to the mapping date.
UNIQUE FARMLAND (U)	Farmland of lesser quality soils used for the production of the state's leading agricultural crops. This land is usually irrigated, but may include non-irrigated orchards or vineyards as found in some climatic zones in California. Land must have been cropped at some time during the four years prior to the mapping date.
FARMLAND OF LOCAL IMPORTANCE (L)	Land of importance to the local agricultural economy as determined by each county's board of supervisors and a local

⁴ The FMMP was signed by the Legislature in 1982, and the first Important Farmland Maps were produced in 1984, covering 30.3 million acres. Through 12 biennial mapping cycles, data has expanded to 48.1 million acres as modern soil surveys were completed by USDA.

	advisory committee.
GRAZING LAND (G)	Land on which the existing vegetation is suited to the grazing of livestock. This category was developed in cooperation with the California Cattlemen's Association, University of California Cooperative Extension, and other groups interested in the extent of grazing activities. The minimum mapping unit for Grazing Land is 40 acres.
URBAN AND BUILT-UP LAND (D)	Land occupied by structures with a building density of at least 1 unit to 1.5 acres, or approximately 6 structures to a 10-acre parcel. This land is used for residential, industrial, commercial, institutional, public administrative purposes, railroad and other transportation yards, cemeteries, airports, golf courses, sanitary landfills, sewage treatment, water control structures, and other developed purposes.
OTHER LAND (X)	Land not included in any other mapping category. Common examples include low density rural developments; brush, timber, wetland, and riparian areas not suitable for livestock grazing; confined livestock, poultry or aquaculture facilities; strip mines, borrow pits; and water bodies smaller than 40 acres. Vacant and nonagricultural land surrounded on all sides by urban development and greater than 40 acres is mapped as Other Land.
WATER (W)	Perennial water bodies with an extent of at least 40 acres.
NOT SURVEYED (Z)	Large government land holdings, including National Parks, Forests, and Bureau of Land Management holdings are not included in FMMP's survey area.

The map included in this document is prepared based on the guidelines in (b) of Section 65080.01.

(b) "Farmland" means farmland that is outside all existing city spheres of influence or city limits as of January 1, 2008, and is one of the following:

- (1) Classified as prime or unique farmland or farmland of statewide importance.
- (2) Farmland classified by a local agency in its general plan that meets or exceeds the standards for prime or unique farmland or farmland of statewide importance.

Transit Priority Project

According to SB 375, 'a transit priority project' can be exempt from, or subject to the limited review of CEQA (the California Environmental Quality Act). The implementation of the SCS only includes 'a transit priority project' that is 'consistent with the general use designation, density, building intensity, and applicable policies specified for the project area in either a sustainable communities strategy or an alternative planning strategy, for which the State Air Resources Board, pursuant to subparagraph (H) of paragraph (2) of subdivision (b) of Section 65080 of the Government Code, has accepted a metropolitan planning organization's determination that the sustainable communities strategy or the alternative planning strategy would, if implemented, achieve the greenhouse gas emission reduction targets.' [Section 2115. (a)]

The bill specifically states that the transit priority project should:

- (1) *contain at least 50 percent residential use, based on total building square footage and, if the project contains between 26 percent and 50 percent nonresidential uses, a floor area ratio of not less than 0.75;*
- (2) *provide a minimum net density of at least 20 dwelling units per acre; and*
- (3) *be within one-half mile of a major transit stop or high-quality transit corridor included in a regional transportation plan. A major transit stop is as defined in Section 1064.3, except that, for purposes of this section, it also includes major transit stops that are included in the applicable regional transportation plan. For purposes of this section, a high-quality transit corridor means a corridor with fixed route bus service with service intervals no longer than 15 minutes during peak commute hours. A project shall be considered to be within one-half mile of a major transit stop or high-quality transit corridor if all parcels within the project have no more than 25 percent of their area farther than one-half mile from the stop or corridor and if not more than 10 percent of the residential units or 100 units, whichever is less, in the project are farther than one-half mile from the stop or corridor. [Section 2115. (b)]*

A transit priority project, which meets all the requirements of subdivision (a) and (b), and one of the requirements of subdivision (c) in Section 21155.1, can be declared by the legislative body of the jurisdiction, after conducting a public hearing, to be a Sustainable Communities Project (SCP). Once the project is designated as SCP, it can benefit from CEQA streamlines. For detailed information on SCP, refer to [Appendix 1: Sustainable Communities Project \(SCP\) Criteria](#).

[Major Stops & High Quality Transit Corridors](#)

To assist to identify the transit priority project areas, SCAG identifies the major stops and high quality transit corridors, and their surrounding areas in one-half mile radius distance, as specified in Section 2115. (b) (3). Major transit stops and high-quality transit corridor extracted from 2035 planned year data in the 2012-2035 RTP/SCS amendment #1.

The definitions of major transit stops and high quality transit corridors are as follows:

Major transit stop

A site containing an rail transit station, a ferry terminal served by either a bus or rail transit service, or the intersection of two or more major bus routes with a frequency of service interval of 15 minutes or less during the morning and afternoon peak commute periods (CA Public Resource Code Section 21064.3). It also includes major transit stops that are included in the applicable regional transportation plan.

High-quality transit corridor

A corridor with fixed route bus service with service intervals no longer than 15 minutes during peak commute hours.

Geographical boundaries

SCAG is considering the collection and adoption of data at a small-area level as optional for local agencies in order to make accessible the CEQA streamlining provisions under SB3 75. The variables of population, households, employment and land use are prepared at city, census tract, and transportation analysis zone (TAZ) level.

City boundary & Sphere of Influence

City boundary and sphere of influence information are from each County's Local Agency Formation Commissions (LAFCO). The information included here are as of July 2012, the base year for the 2016-2040 RTP/SCS. SCAG only uses the data directly from LAFCO as the legitimate source based on the legal requirement of SB 375. For inaccuracy or changes in city boundaries or sphere of influences, local jurisdictions need to contact LAFCO to reflect the most accurate city and sphere boundaries.

Census tract boundary

The census tract boundaries are the 2010 TIGER/Line Shapefiles version, downloaded from U.S. Census, TIGER (Topologically Integrated Geographic Encoding and Referencing) Products website (<http://www.census.gov/geo/maps-data/data/tiger.html>).

TAZ boundary

SCAG developed the Transportation Analysis Zones (TAZ) for the SCAG Region, based on the 2010 Tiger Census Block. This is used to facilitate Travel Demand and Land Use Modeling needs at SCAG.

Appendix 1: Sustainable Communities Project (SCP) Criteria

(Extracted from Senate Bill No. 375 Chapter 728)

Chapter 4.2. Implementation of the Sustainable Communities Strategy

21155.1. If the legislative body finds, after conducting a public hearing, that a transit priority project meets all of the requirements of subdivisions (a) and (b) and one of the requirements of subdivision (c), the transit priority project is declared to be a sustainable communities project and shall be exempt from this division.

(a) The transit priority project complies with all of the following environmental criteria:

(1) The transit priority project and other projects approved prior to the approval of the transit priority project but not yet built can be adequately served by existing utilities, and the transit priority project applicant has paid, or has committed to pay, all applicable in-lieu or development fees.

(2)

(A) The site of the transit priority project does not contain wetlands or riparian areas and does not have significant value as a wildlife habitat, and the transit priority project does not harm any species protected by the federal Endangered Species Act of 1973 (16 U.S.C. Sec. 1531 et seq.), the Native Plant Protection Act (Chapter 10 (commencing with Section 1900) of Division 2 of the Fish and Game Code), or the California Endangered Species Act (Chapter 1.5 (commencing with Section 2050) of Division 3 of the Fish and Game Code), and the project does not cause the destruction or removal of any species protected by a local ordinance in effect at the time the application for the project was deemed complete.

(B) For the purposes of this paragraph, "wetlands" has the same meaning as in the United States Fish and Wildlife Service Manual, Part 660 FW 2 (June 21, 1993).

(C) For the purposes of this paragraph:

(i) "Riparian areas" means those areas transitional between terrestrial and aquatic ecosystems and that are distinguished by gradients in biophysical conditions, ecological processes, and biota. A riparian area is an area through which surface and subsurface hydrology connect waterbodies with their adjacent uplands. A riparian area includes those portions of terrestrial ecosystems that significantly influence exchanges of energy and matter with aquatic ecosystems. A riparian area is adjacent to perennial, intermittent, and ephemeral streams, lakes, and estuarine-marine shorelines.

(ii) "Wildlife habitat" means the ecological communities upon which wild animals, birds, plants, fish, amphibians, and invertebrates depend for their conservation and protection.

(iii) Habitat of "significant value" includes wildlife habitat of national, statewide, regional, or local importance; habitat for species protected by the federal Endangered Species Act of 1973 (16 U.S.C. Sec. 1531, et seq.), the California Endangered Species Act (Chapter 1.5 (commencing with Section 2050) of Division 3 of the Fish and Game Code), or the Native Plant Protection Act (Chapter 10 (commencing with Section 1900) of Division 2 of the Fish and Game Code); habitat identified as candidate, fully protected, sensitive, or species of special status by local, state, or federal agencies; or habitat essential to the movement of resident or migratory wildlife.

(3) The site of the transit priority project is not included on any list of facilities and sites compiled pursuant to Section 65962.5 of the Government Code.

(4) The site of the transit priority project is subject to a preliminary endangerment assessment prepared by a registered environmental assessor to determine the existence of any release of a hazardous substance on the site and to determine the potential for exposure of future occupants to significant health hazards from any nearby property or activity.

(A) If a release of a hazardous substance is found to exist on the site, the release shall be removed or any significant effects of the release shall be mitigated to a level of insignificance in compliance with state and federal requirements.

(B) If a potential for exposure to significant hazards from surrounding properties or activities is found to exist, the effects of the potential exposure shall be mitigated to a level of insignificance in compliance with state and federal requirements.

(5) The transit priority project does not have a significant effect on historical resources pursuant to Section 21084.1.

(6) The transit priority project site is not subject to any of the following:

(A) A wildland fire hazard, as determined by the Department of Forestry and Fire Protection, unless the applicable general plan or zoning ordinance contains provisions to mitigate the risk of a wildland fire hazard.

(B) An unusually high risk of fire or explosion from materials stored or used on nearby properties.

(C) Risk of a public health exposure at a level that would exceed the standards established by any state or federal agency.

(D) Seismic risk as a result of being within a delineated earthquake fault zone, as determined pursuant to Section 2622, or a seismic hazard zone, as determined pursuant to Section 2696, unless the applicable general plan or zoning ordinance contains provisions to mitigate the risk of an earthquake fault or seismic hazard zone.

(E) Landslide hazard, flood plain, flood way, or restriction zone, unless the applicable general plan or zoning ordinance contains provisions to mitigate the risk of a landslide or flood.

(7) The transit priority project site is not located on developed open space.

(A) For the purposes of this paragraph, "developed open space" means land that meets all of the following criteria:

(i) Is publicly owned, or financed in whole or in part by public funds.

(ii) Is generally open to, and available for use by, the public.

(iii) Is predominantly lacking in structural development other than structures associated with open spaces, including, but not limited to, playgrounds, swimming pools, ballfields, enclosed child play areas, and picnic facilities.

(B) For the purposes of this paragraph, "developed open space" includes land that has been designated for acquisition by a public agency for developed open space, but does not include lands acquired with public funds dedicated to the acquisition of land for housing purposes.

(8) The buildings in the transit priority project are 15 percent more energy efficient than required by Chapter 6 of Title 24 of the California Code of Regulations and the buildings and landscaping are designed to achieve 25 percent less water usage than the average household use in the region.

(b) The transit priority project meets all of the following land use criteria:

- (1) The site of the transit priority project is not more than eight acres in total area.
- (2) The transit priority project does not contain more than 200 residential units.
- (3) The transit priority project does not result in any net loss in the number of affordable housing units within the project area.
- (4) The transit priority project does not include any single level building that exceeds 75,000 square feet.
- (5) Any applicable mitigation measures or performance standards or criteria set forth in the prior environmental impact reports, and adopted in findings, have been or will be incorporated into the transit priority project.
- (6) The transit priority project is determined not to conflict with nearby operating industrial uses.
- (7) The transit priority project is located within one-half mile of a rail transit station or a ferry terminal included in a regional transportation plan or within one-quarter mile of a high-quality transit corridor included in a regional transportation plan.

(c) The transit priority project meets at least one of the following three criteria:

- (1) The transit priority project meets both of the following:
 - (A) At least 20 percent of the housing will be sold to families of moderate income, or not less than 10 percent of the housing will be rented to families of low income, or not less than 5 percent of the housing is rented to families of very low income.
 - (B) The transit priority project developer provides sufficient legal commitments to the appropriate local agency to ensure the continued availability and use of the housing units for very low, low-, and moderate-income households at monthly housing costs with an affordable housing cost or affordable rent, as defined in Section 50052.5 or 50053 of the Health and Safety Code, respectively, for the period required by the applicable financing. Rental units shall be affordable for at least 55 years. Ownership units shall be subject to resale restrictions or equity sharing requirements for at least 30 years.
- (2) The transit priority project developer has paid or will pay in-lieu fees pursuant to a local ordinance in an amount sufficient to result in the development of an equivalent number of units that would otherwise be required pursuant to paragraph (1).
- (3) The transit priority project provides public open space equal to or greater than five acres per 1,000 residents of the project.

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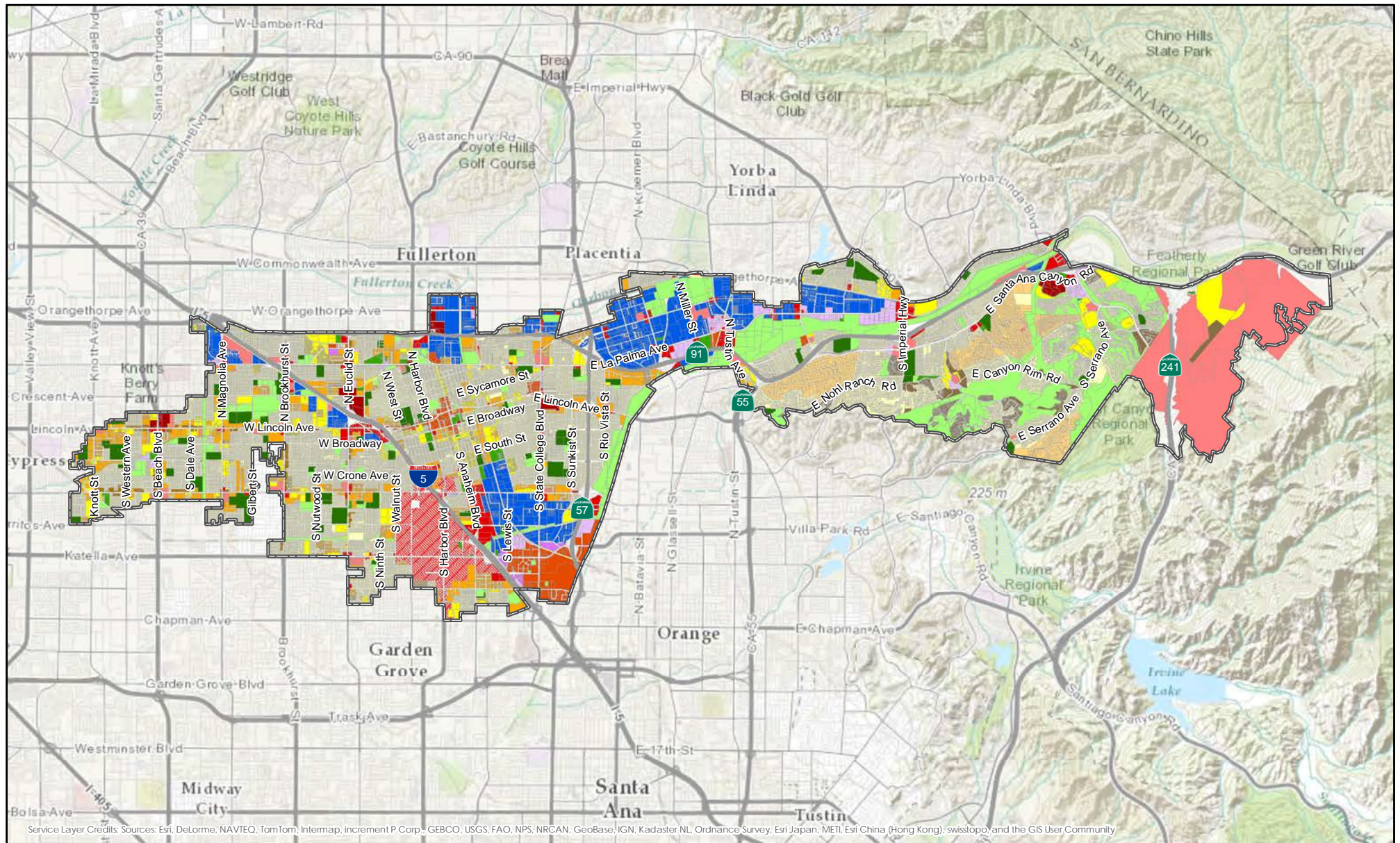
Maps

The list of GIS maps included:

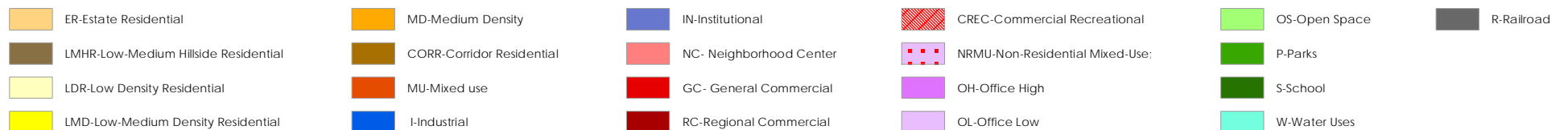
- General Plan Land Use (Based on City Codes)
- General Plan Land Use (Based on 2012 SCAG General Plan Land Use Codes)
- Zoning
- Existing Land Use (Based on 2012 SCAG Existing Land Use Codes)
- Endangered, Threatened, and Rare Plant and Animal Species
- Federally Designated Flood Hazard Zones
- Natural Community & Habitat Conservation Plans
- Protected Open Space
- Farmland
- Major Stops & High Quality Transit Corridors
- Sphere of Influence
- Census Tract boundary
- Transportation Analysis Zone (TAZ) boundary

It should be noted that some maps may be missing for a few jurisdictions due to insufficient local input data.

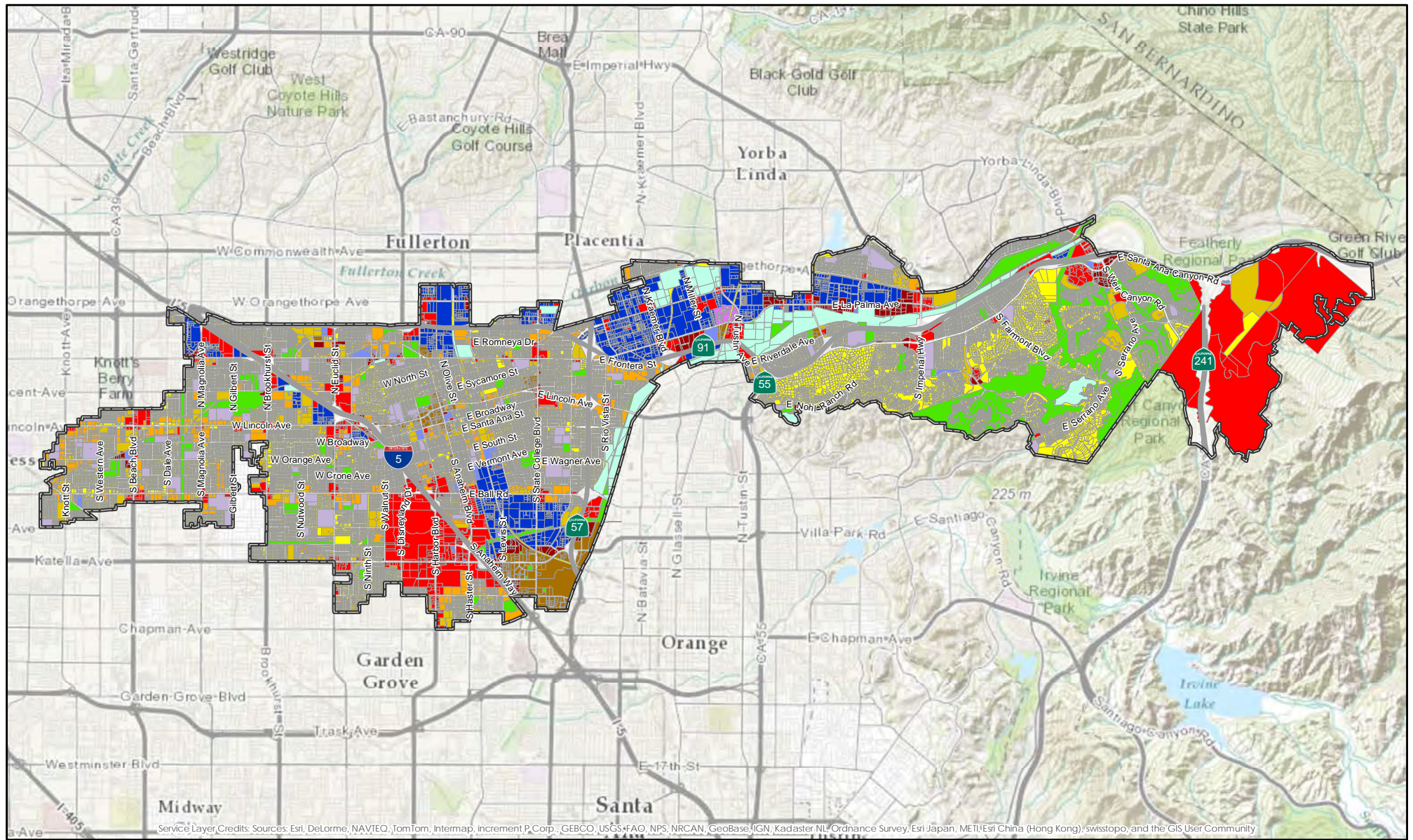
General Plan Land Use in City of Anaheim



General Plan Land Use Designations of the City of Anaheim



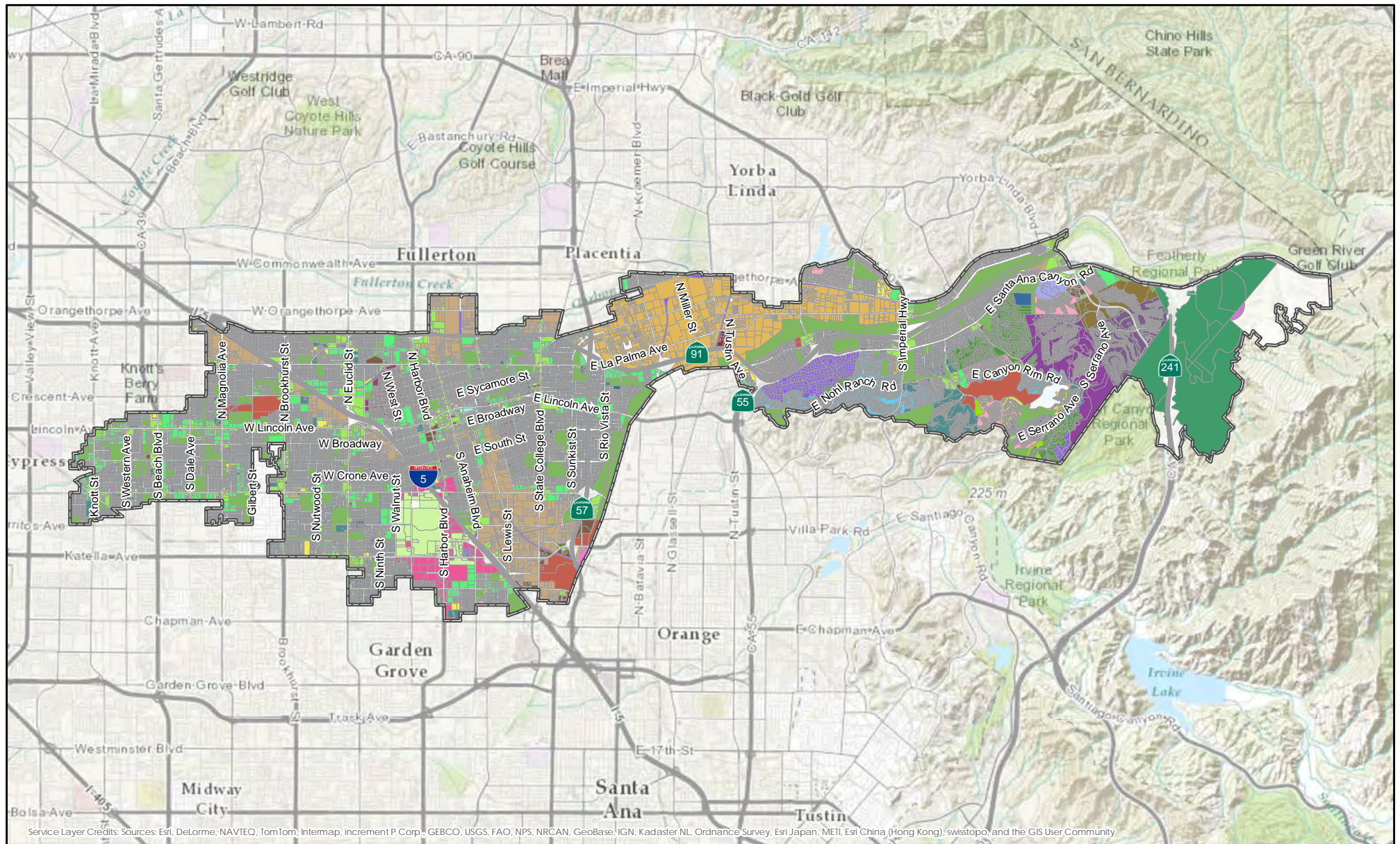
General Plan Land Use in City of Anaheim



2012 SCAG General Plan Land Use Codes

Single Family Residential	Commercial and Services	Transportation, Communications, and Utilities	Vacant
Multi-Family Residential	Facilities	Mixed Commercial and Industrial	Water
Mobile Homes and Trailer Parks	Education	Mixed Residential and Commercial	Specific Plan
Mixed Residential	Military Installations	Open Space and Recreation	Undevelopable or Protected Land
General Office	Industrial	Agriculture	Unknown

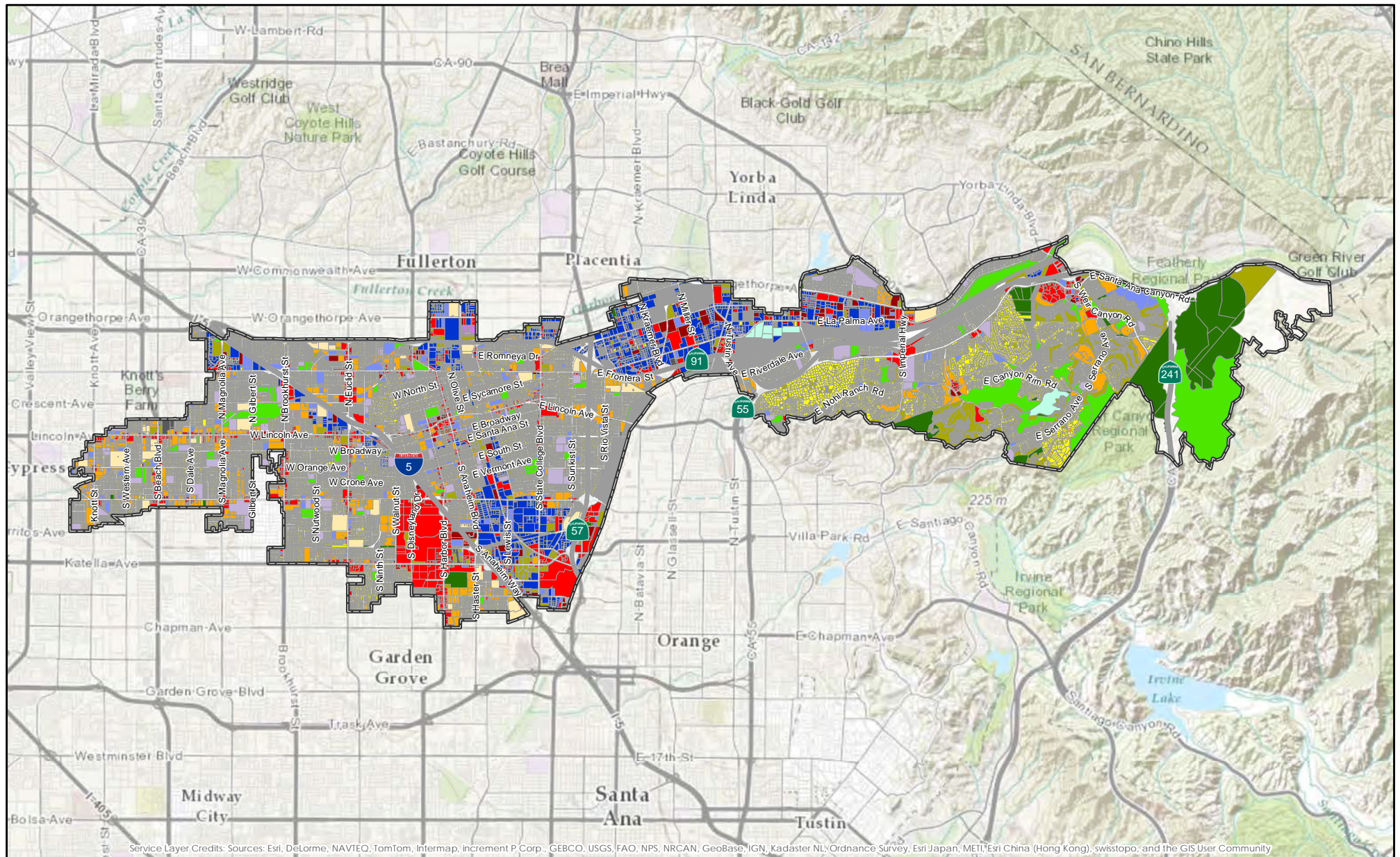
Zoning in City of Anaheim



Service Layer Credits: Sources: Esri, DeLorme, NAVTEQ, TomTom, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), swisstopo, and the GIS User Community

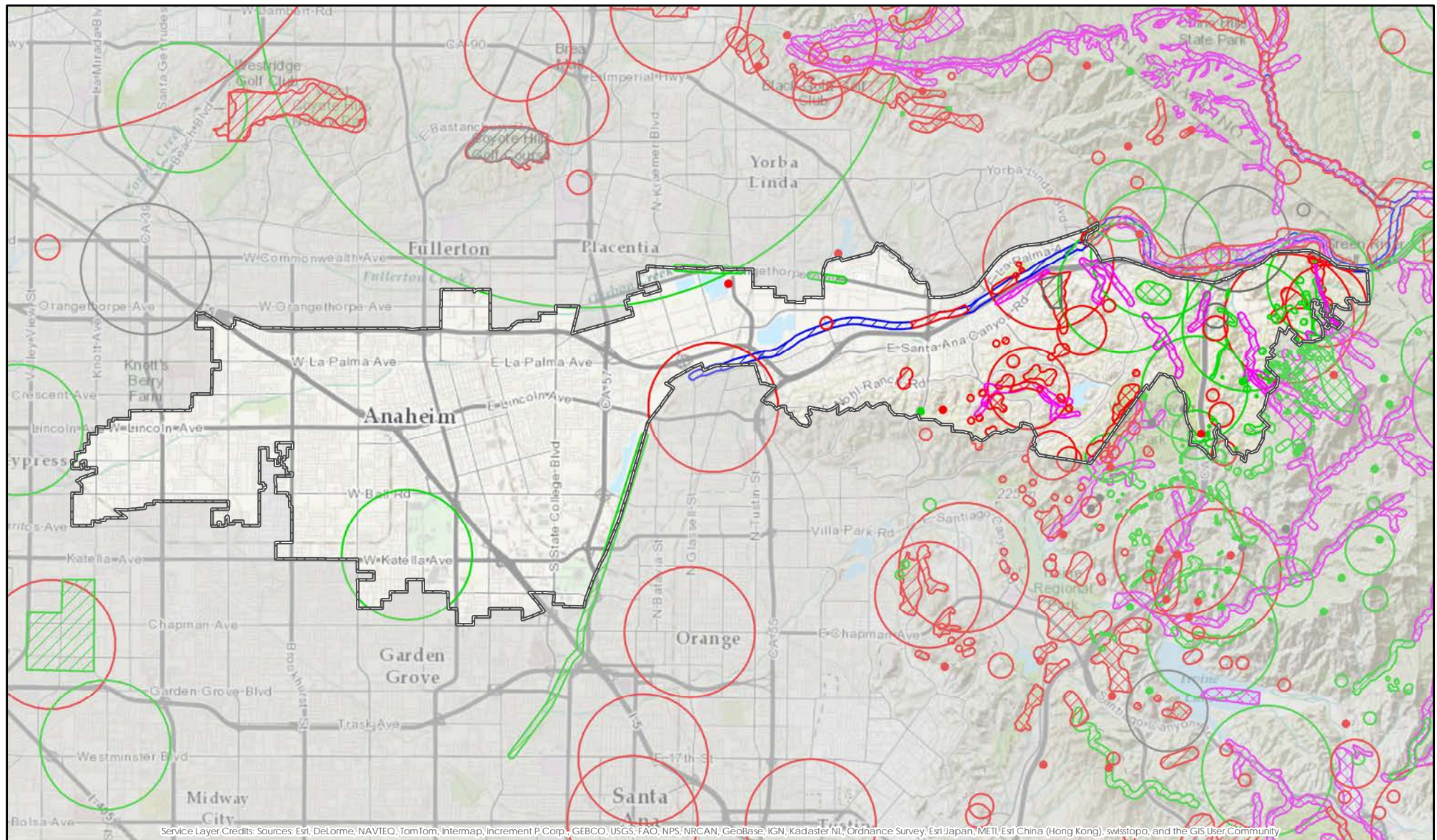
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I	RH-1	RM-4	SP	SP 90-1	SP 93-1
O-H	RH-2	RS-1	SP 87-1	SP 90-2	SP 94-1
O-L	RH-3	RS-2	SP 88-1	SP 90-4	T
OS	RM-2	RS-3	SP 88-2	SP 92-1	

Existing Land Use in City of Anaheim



- | | | | |
|--------------------------------|-------------------------|---|---------------------------------|
| Single Family Residential | Commercial and Services | Transportation, Communications, and Utilities | Vacant |
| Multi-Family Residential | Facilities | Mixed Commercial and Industrial | Water |
| Mobile Homes and Trailer Parks | Education | Mixed Residential and Commercial | Under Construction |
| Mixed Residential | Military Installations | Open Space and Recreation | Undevelopable or Protected Land |
| General Office | Industrial | Agriculture | Unknown |

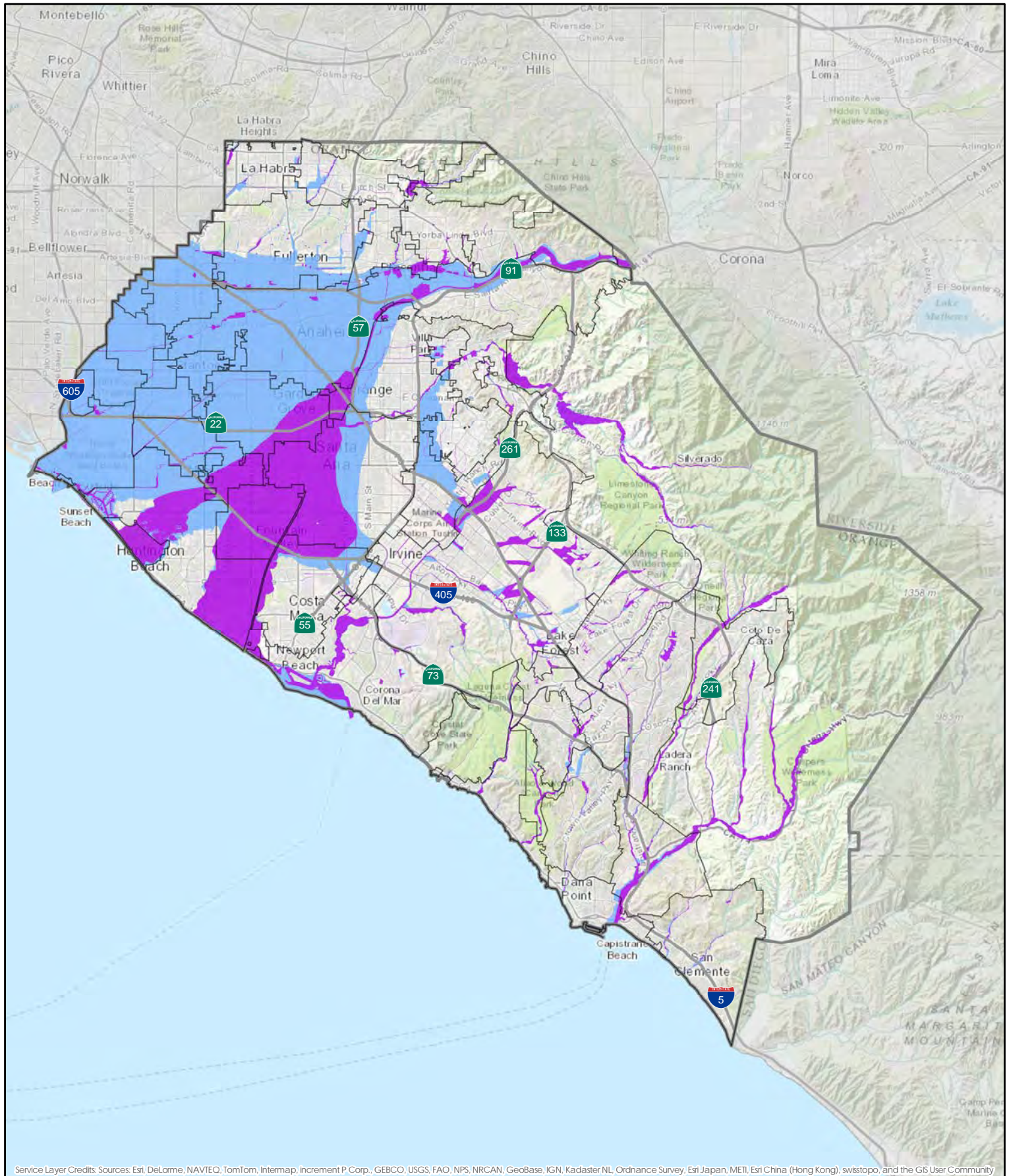
Known Sightings of Endangered, Threatened, and Rare Plant and Animal Species in City of Anaheim



Service Layer Credits: Sources: Esri, DeLorme, NAVTEQ, TomTom, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), swisstopo, and the GIS User Community

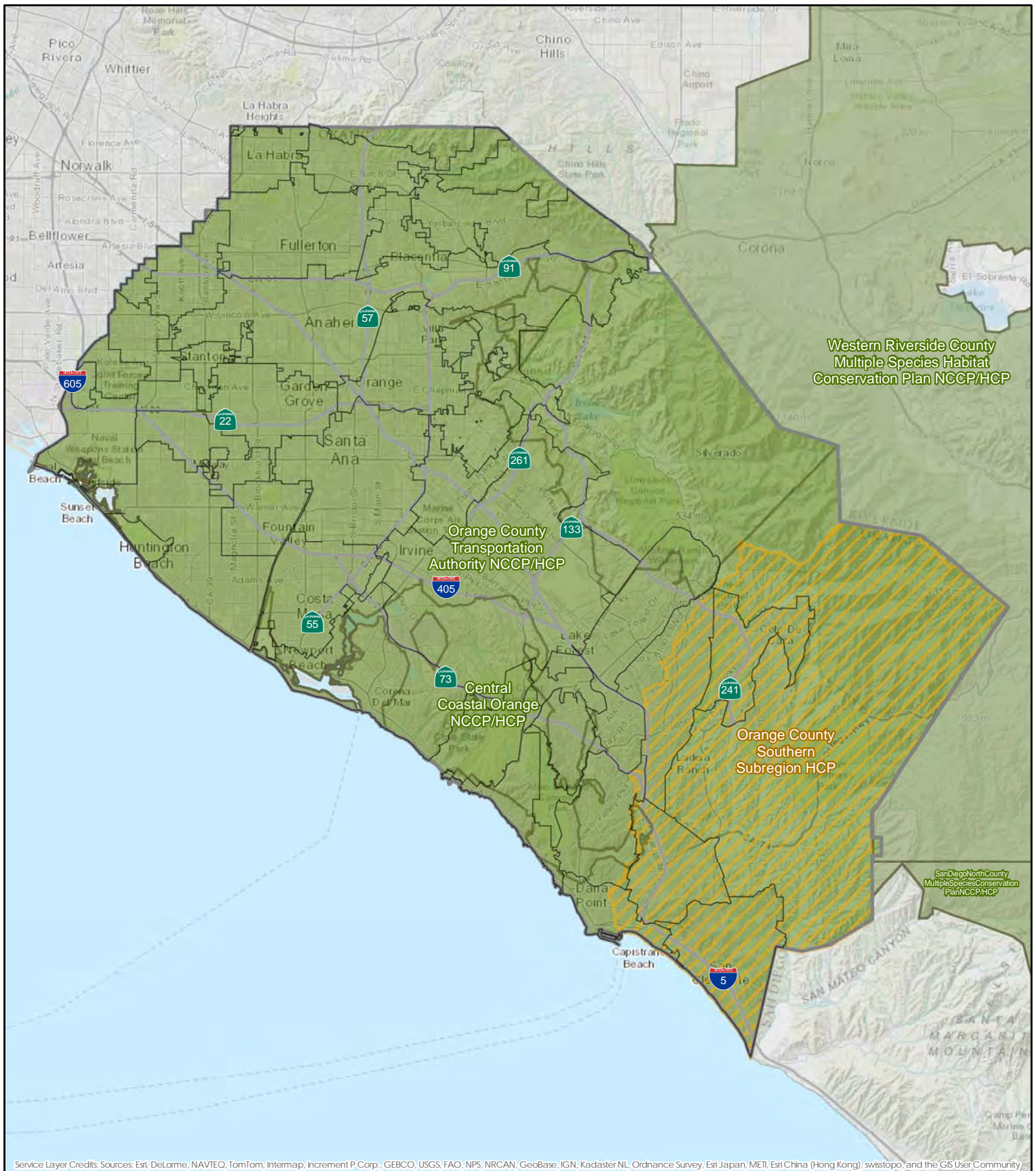
■ Plant (80m)	■ Animal (80m)	■ Terrestrial Comm. (80m)	■ Aquatic Comm. (80m)	■ Multiple (80m)
▨ Plant (specific)	▨ Animal (specific)	▨ Terrestrial Comm. (specific)	▨ Aquatic Comm. (specific)	▨ Multiple (specific)
▤ Plant (non-specific)	▤ Animal (non-specific)	▤ Terrestrial Comm. (non-specific)	▤ Aquatic Comm. (non-specific)	▤ Multiple (non-specific)
○ Plant (circular)	○ Animal (circular)	○ Terrestrial Comm. (circular)	○ Aquatic Comm. (circular)	○ Multiple (circular)

Federally Designated Flood Hazard Zones in Orange County



County Boundary
 City Boundary
 100-year Flood Hazard Zone
 500-year Flood Hazard Zone

Natural Community & Habitat Conservation Plans (NCCP & HCP) in Orange County



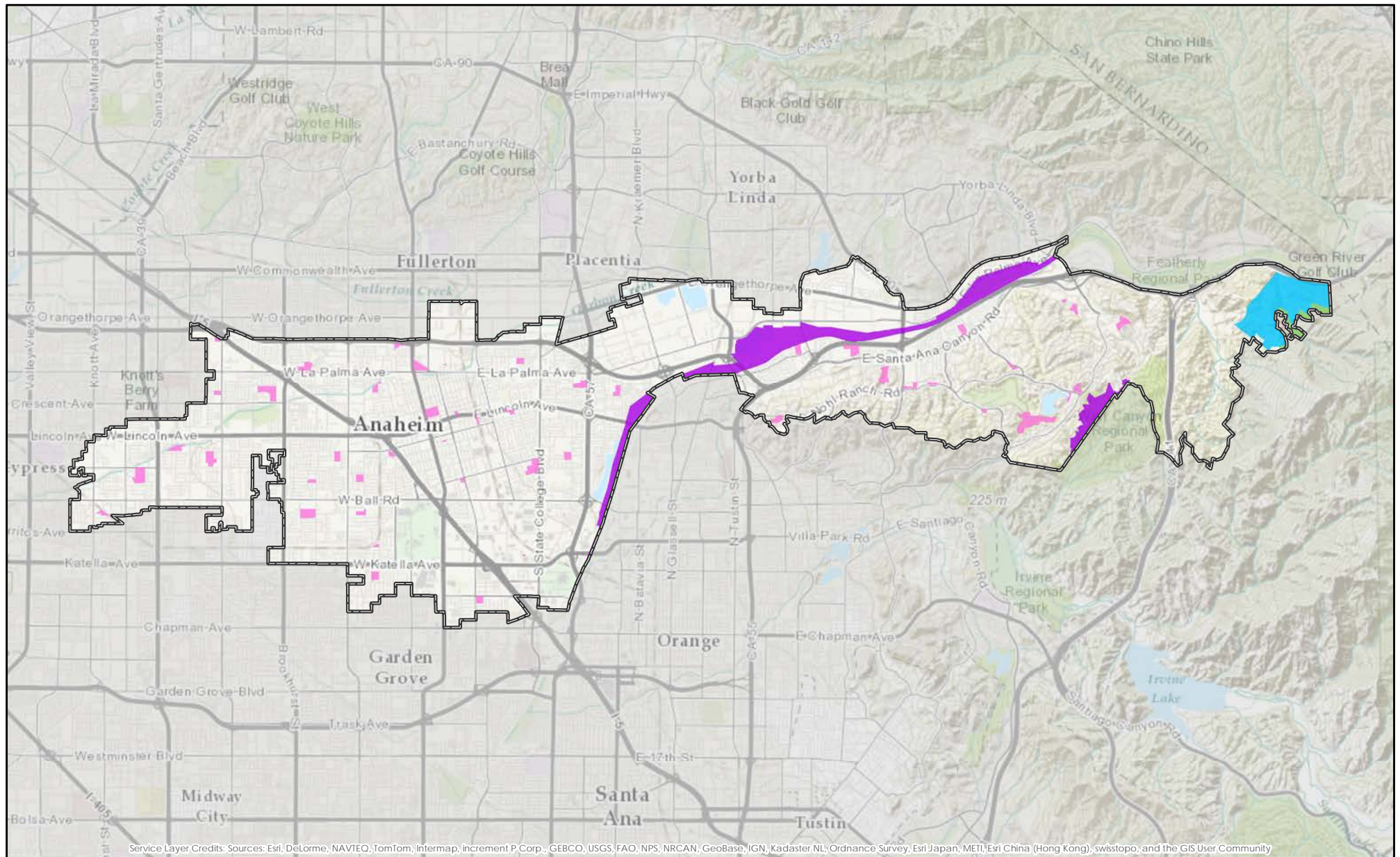
County Boundary

City Boundary












NCCP / HCP

HCP

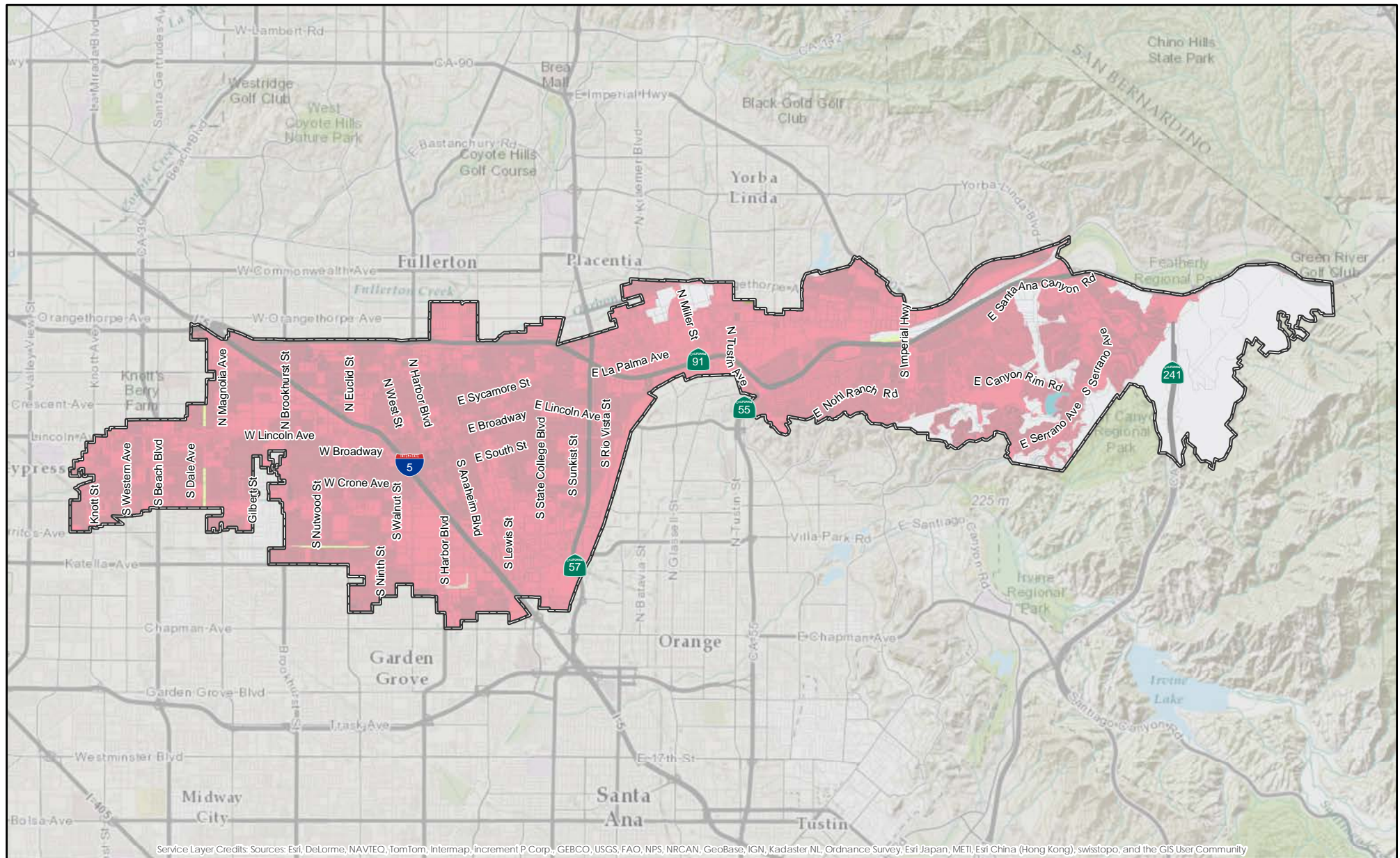
Protected Open Space in City of Anaheim



By Ownership

 US Forest Service	 Other Federal	 County	 US Military/Defense
 US Bureau of Land Management	 California Department of Parks and Recreation	 City	
 National Park Service	 California Department of Fish and Wildlife	 Non Governmental Organization	
 US Fish and Wildlife Service	 Other State	 Special District	

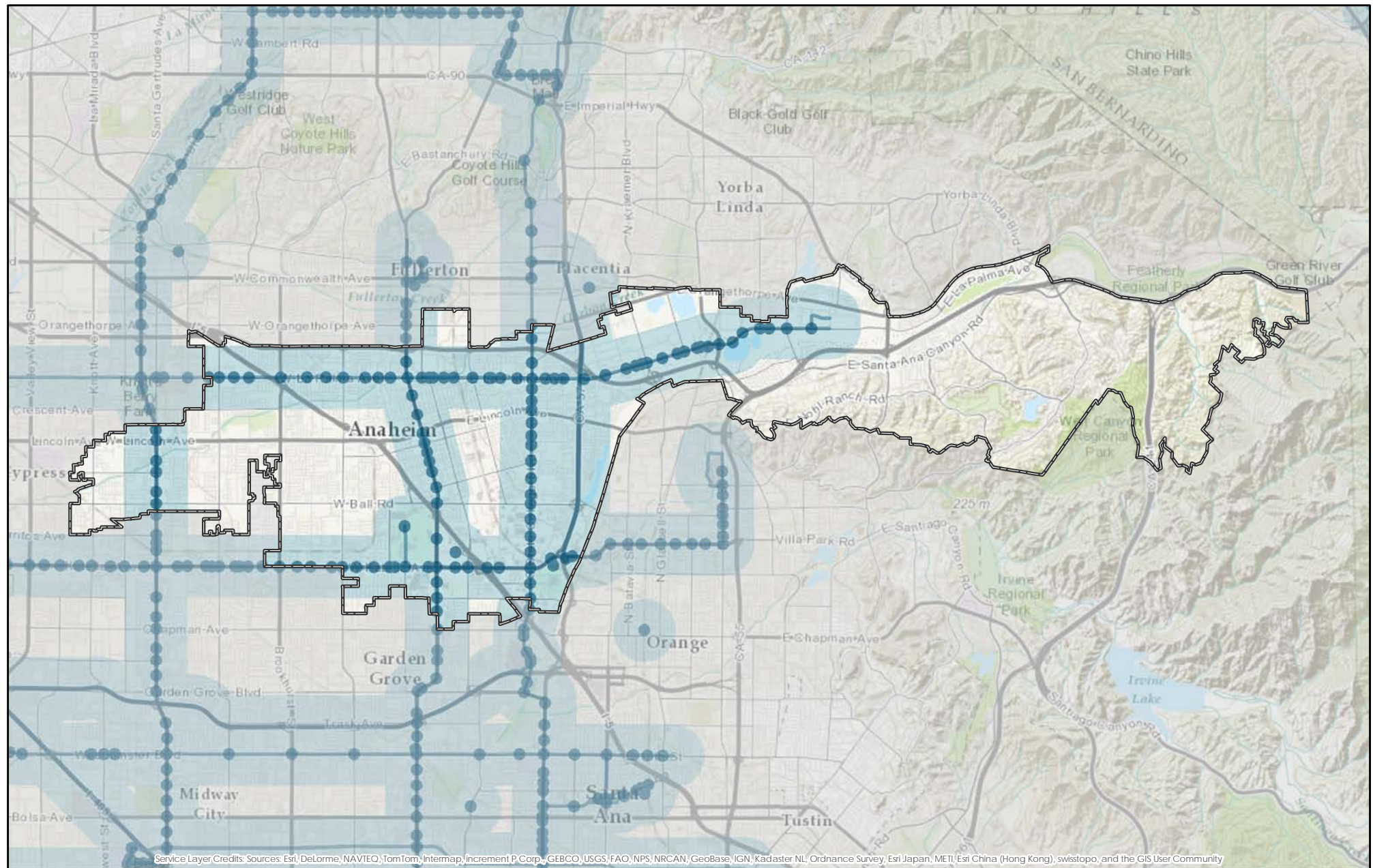
Farmland in City of Anaheim



Service Layer Credits: Sources: Esri, DeLorme, NAVTEQ, TomTom, Intermap, Increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), swisstopo, and the GIS User Community

- | | | | |
|----------------------------------|------------------------------|---|-------------------------|
| Prime Farmland | Farmland of Local Importance | Nonagricultural or Natural Vegetation | Urban and Built-Up Land |
| Farmland of Statewide Importance | Farmland of Local Potential | Vacant or Disturbed Land | Water Area |
| Unique Farmland | Other Land | Rural Residential Land | Irrigated Farmland |
| Grazing Land | Confined Animal Agriculture | Semi-agricultural and Rural Commercial Land | Nonirrigated Farmland |
| | | | Out of Survey Area |

Major Transit Stops & High-Quality Transit Corridor (HQTC) in City of Anaheim



City Boundary



Major Transit Stops

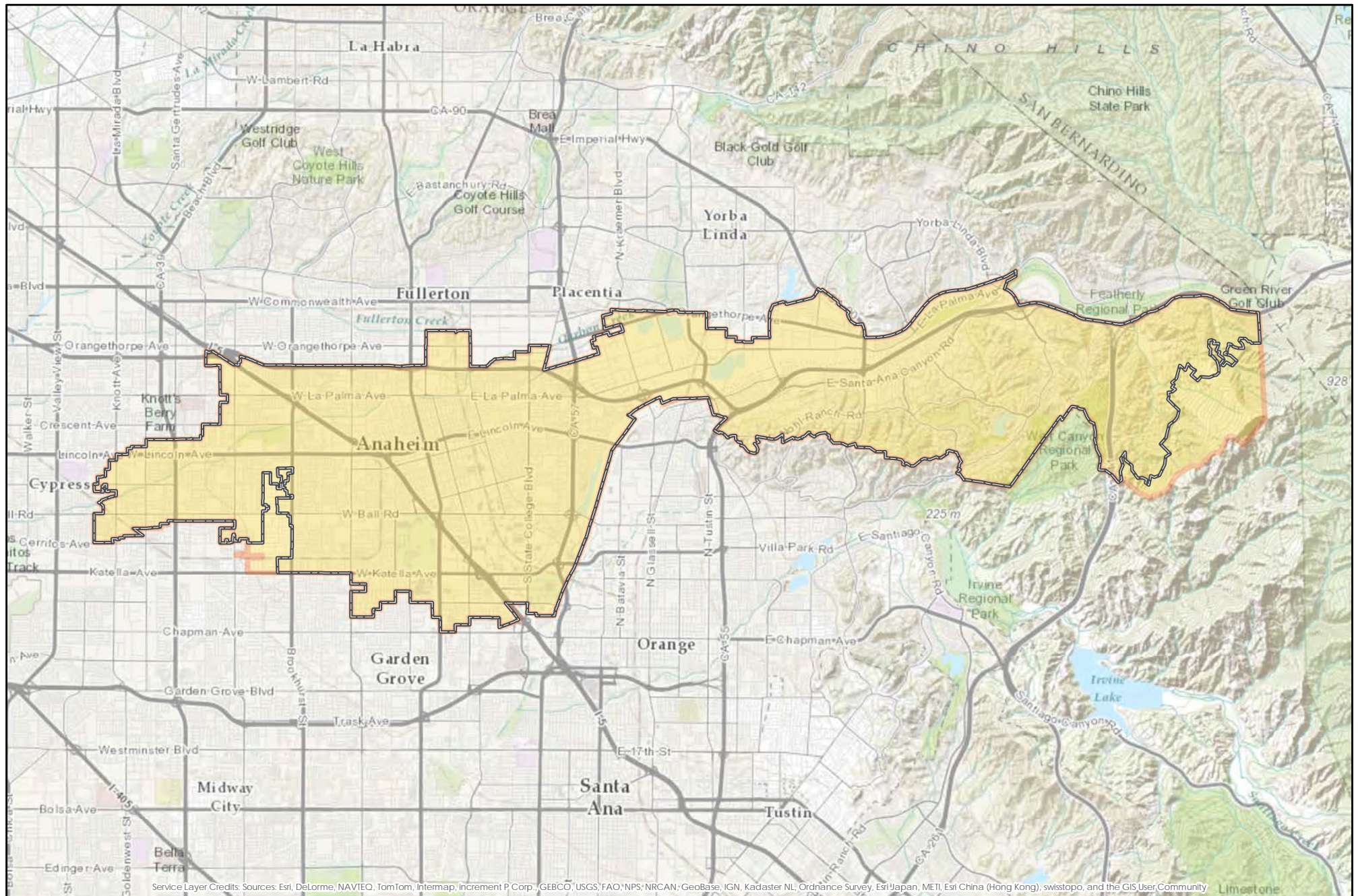


HQTC



0.5 mile Buffer from Major Transit Stops & HQTC

Sphere of Influence for City of Anaheim

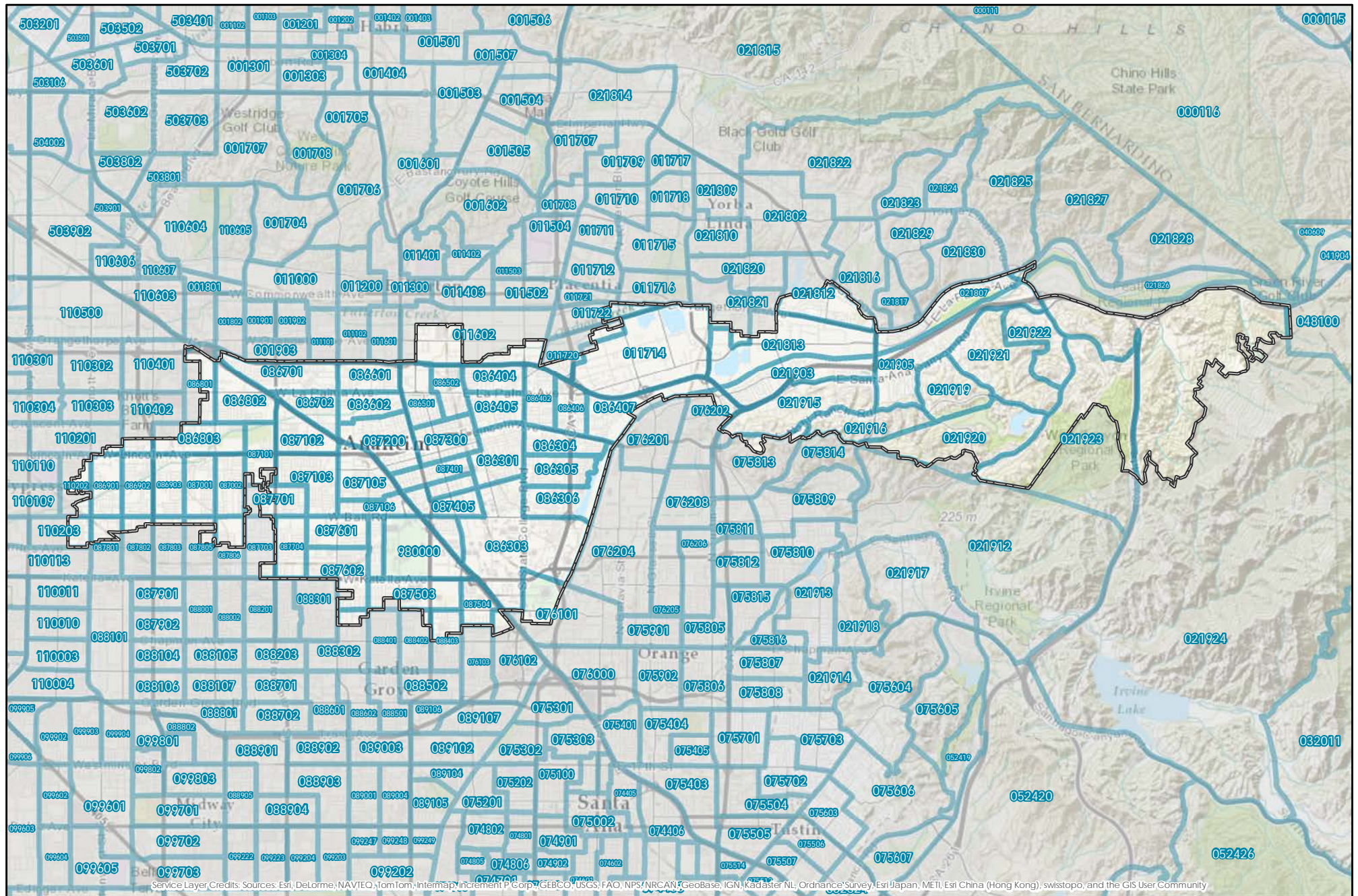


City Boundary



Sphere of Influence

Census Tracts in City of Anaheim

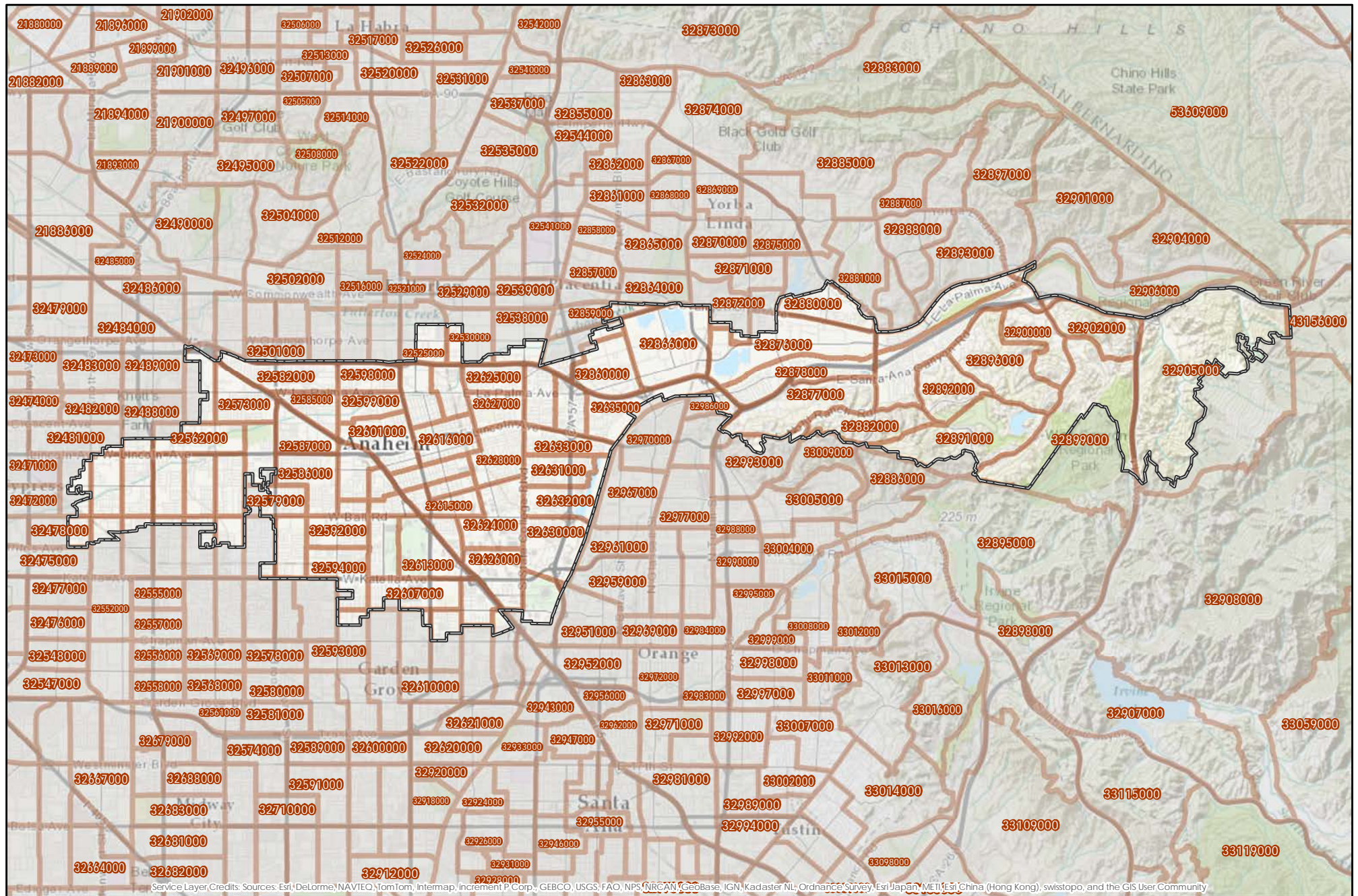


City Boundary



2010 Census Tracts

Transportation Analysis Zones in City of Anaheim



City Boundary



Transportation Analysis Zones (TAZ)



Acknowledgments

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